№ 3845.63

THE TRVSTEES OF THE PVBLIC LIBRARY
LVX OMNIVM CIVIVM
OF THE CITY OF BOSTON
1852 1878

N JAN 17
1903
K FEB 2
J DEC 6
B OCT 30
NOV 19 B
1913
SEP 10 D
JUN 27
APR 18

APR 25
78889

GORDON'S
PINETUM.

THIRD ISSUE, WITH ADDITIONS.

1880.

THE

PINETUM:

BEING

A SYNOPSIS OF ALL THE CONIFEROUS PLANTS AT PRESENT KNOWN,

WITH

DESCRIPTIONS, HISTORY AND SYNONYMS,

AND A COMPREHENSIVE SYSTEMATIC INDEX.

LIBRARY OF THE CITY OF BOSTON

3825.63

BY

GEORGE GORDON, A.L.S.,

FORMERLY SUPERINTENDENT OF THE HORTICULTURAL GARDENS, CHISWICK.

New Edition,

CONSIDERABLY ENLARGED, INCORPORATING THE FORMER SUPPLEMENT,
AND INCLUDING AN INDEX OF THE POPULAR NAMES
OF CONIFERÆ, ENGLISH AND FOREIGN,

To which is now added

An Alphabetical Reference-List of all the coloured plates of the Genus Pinus published in the great works of Lambert, Lawson, and Forbes,

BY

HENRY G. BOHN, F.L.S., F.R.H.S., F.R.G.S.

6927

LONDON:
HENRY G. BOHN, HENRIETTA STREET, COVENT GARDEN,
SIMPKIN, MARSHALL, & CO., STATIONERS' HALL COURT.
And the "Garden" Office, 37, Southampton Street, Strand.
1880.

Another ed. 3845.56

B. H.
273,307.
Jan. 22, 1880.

PREFACE

TO THE FIRST EDITION. MAY 31ST, 1858.

WITH the view of rendering the present work useful to those unacquainted with the science of botany, the author has throughout aimed at the utmost simplicity in language and arrangement. The alphabetical mode has therefore been adopted in reference both to the Genera and Species by means of which any Conifer, of which the name is known, may be immediately found. And for the use of those who possess some botanical knowledge, a diagnostic table is prefixed.

The descriptions of the Genera are comprehensive though concise; and each species is accompanied by all its synonyms, with the authorities for them. Care has also been taken to furnish such information respecting habits, value, products, &c., as is likely to be required by the planter or cultivator.

The Volume is completed by an Index containing nearly 1700 names.

In conclusion, the author begs to acknowledge with thanks the valuable assistance afforded by his foreign correspondents, particularly those in Germany, France, and Mexico. He desires also to express his obligations to Mr. R. Pince, of the Great Exeter Nursery, and Mr. H. Low, of the Clapton Nursery.

PREFACE TO THE SUPPLEMENTARY VOLUME

PUBLISHED FEB. 13TH, 1862.

IN producing a Supplement to the Pinetum at the present time it is only necessary to refer to the frequent introduction of new Conifers, or what are said to be new ones, together with the mutability of names, and the Babylonian confusion which still exists in their nomenclature. The trade lists, too, with some praiseworthy exceptions, abound with numerous *aliases*, as may be seen by a slight comparison of such lists with the ample indexes given at the end of the volume, where all the synonyms are printed in Italics.

Amongst the additional species and varieties recorded in the present Supplement, will be found several which have not before been enumerated, together with other information of a recent date, particularly the identification and correction of M. Roezl's Mexican Pines; and the notification of some errors of long standing in books of authority; the whole being completed with an Index, containing all the systematic names to be found in the present Supplement, which amount to upwards of 580.

In conclusion, the Author desires to express his thanks to those noblemen and gentlemen who have so liberally furnished him with materials for examination, and, at the same time, informed him of the sources whence they received their plants, thus enabling him to direct his attention to such establishments as were most worthy of notice, not only for the great extent of their collections, but for general accuracy in nomenclature.

He also wishes to express his obligations to Mr. John Standish, of the Ascot Nursery; Messrs. Osborn, of Fulham; Mr. Robert Glendinning, of Chiswick; Mr. William Paul, of Waltham Cross; Mr. William Wood, of Maresfield; Mr. Alexander Dancer, of Fulham; Mr. Richard Smith, of Worcester, and Messrs. Rollison, of Tooting, for useful information and specimens sent for examination.

PREFACE TO THE PRESENT EDITION.

THE author having been called upon for a new edition of his work, the former being now out of print and extremely scarce, feels that he has little more to say than to repeat his thanks to the various growers of Coniferæ to whom he has been formerly indebted, and to add the names of John Dollin Bassett, Esq., of Leighton Buzzard, Bedfordshire; Henry G. Bohn, Esq. (the publisher, who has a fine collection of Coniferæ, and has contributed the Popular Index to the present edition), and the following Nurserymen— Mr. Anthony Waterer, Knaphill Nursery, Woking; Messrs. William Barron & Son, Elvaston Nurseries, Derby; the Lawson Company, Edinburgh; Mr. Maurice Young, Milford Nursery, Godalming; Mr. Cripps, Tunbridge Wells; Messrs. James Veitch & Sons, Chelsea; Mr. John Scott, Merriott, Somerset; and Mr. William Buckley, late of the Tooting Nursery; all of whom have furnished specimens and information of great value to the work.

GEORGE GORDON.

February, 1875.

ADDENDA.

HENRY G. BOHN has thought it desirable, in the present re-issue of Gordon's Pinetum, to add a list of references to the coloured plates given in the three great, and now scarce and expensive, English works devoted to the illustration of Coniferæ; and this idea has met with the approval of his botanical friends. The following are the names of the books referred to:

- LAWSONS' PINETUM BRITANNICUM, published by subscription in 37 parts, atlas folio, 1866-73, contains 41 coloured plates besides numerous engravings, but as none of these are numbered, it has been found necessary, by way of facilitating reference, to adopt numbers according to the order of the letter-press.
- LAMBERT'S GENUS PINUS, edited by Professor Don, 3 vols., atlas folio, second and most complete edition, 1837, with 101 coloured plates and two very large uncoloured ones. These plates being only numbered up to 51, the subsequent ones are numbered in the order of the letter-press.
- THE PINETUM WOBURNENSE, a catalogue of the Coniferous Plants in the collection of the Duke of Bedford at Woburn Abbey, systematically arranged by J. Forbes, imperial 8vo., 1839, containing 68 coloured plates.

There are many *foreign* works which incidentally contain coloured illustrations of local Coniferæ, such as those of Jacquin, Pallas, Humboldt, Sibthorp's Flora Græca, etc., etc., but one of the most accessible and comprehensive in this department is Michaux's North American Sylva, with Nuttall's continuation, together 6 vols., royal 8vo., Philadelphia, 1840-49, containing 278 coloured plates.

⁂ *All the above-named works, in case of need, are to be found in the fine library of the Linnæan Society, and of course in the British Museum.*

For the numerous *Synonyms* of the Coniferæ quoted in the following list it will be necessary to refer to Gordon's Systematic Index at the end of the present volume. For instance, the very first Conifer in the list, *Abies Albertiana*, has no fewer than 10 Synonyms, several of which are under the heading of *Pinus*, *Picea*, or *Tsuga*.

REFERENCE-LIST OF COLOURED PLATES.

	References to Gordon.
Abies Albertiana. Lawson, 17	29
Abies Amabalis. Woburn, 44	213
Abies Balsamea, and many others formerly classed as *Abies* are now considered *Pines*, and are placed in the alphabet accordingly	200
Abies Carpatica. Lawson, 32	6
Abies Douglasii. Lambert, 91. Lawson, 37. Woburn, 45	24
Abies Excelsa. Lambert, 26. Lawson, 31. Woburn, 29	6
Abies Hookeriana. Lawson, 6, 15	30
Abies Medioxima. Lawson, 31	6
Abies Menziesii. *See* Pinus	12
Abies Nigra. *See* Pinus	13
Abies Rubra. *See* Pinus	17
Abies Orientalis. Lambert, 31. Lawson, 20	15
Abies Pichta. Woburn, 39	221
Abies Pattoniana. Lawson, 6	30
Araucaria Brasiliensis. Lambert, 46. Woburn, 53, 54	37
Araucaria Cunninghamii. Lambert, 102. Woburn, 52	44
Araucaria Excelsa. Lambert, 47. Woburn, 50	45
Araucaria Imbricata. Lambert, 45. Lawson, 41. Woburn, 55, 56	39
Arbor Vitæ. *See* Thuja	400
Cedrus Atlantica. Lawson, 25	60
Cedrus Deodora. Lambert, 42. Lawson, 9, 14. Woburn, 48	61
Cedrus Libani. Lawson, 14, 39	65
Cunninghamia Lanciolata. Lambert, 37. Woburn, 57	77
Cupressus Horizontalis. Woburn, 61	96
Cupressus Lawsoniana. Lawson, 21	85
Cupressus Lusitanica. Lambert, 49. Woburn, 62	89
Cupressus Nutkaensis. Lawson, 36	94
Cupressus Pendula. Lambert, 50	82
Cupressus Torulosa. Lawson, 31	97
Dadcrydium Cupressinum. Lambert, 51. Woburn, 67	104
Dammara Australis. Lambert, 44. Woburn, 59	108
Dammara Orientalis. Lambert, 43. Woburn, 58	111
Juniperus Excelsa. Woburn, 64	143

	References to Gordon.
Juniperus Chinensis. Woburn, 65	158
Larix Pendula. *See* Pinus	177
Picea Apollinis. Lawson, 7	197
Picea Bracteata. Lawson, 18	202
Picea Cephalonica. Lawson, 4. Woburn, 42	203
Picea Nobilis. Lawson, 1. Woburn, 40	207
Picea Pinsapo. Lawson, 5	224
Pinus Abies. Lambert, 27	6
Pinus Alba (*vel* Abies). Lambert, 28. Woburn, 33	3
Pinus Banksiana. Lambert, 3. Woburn, 3	230
Pinus Balsamea. Lambert, 33. Woburn, 37	200
Pinus Bracteata. Lambert, 98	202
Pinus Brutia. Lambert, 75. Woburn, 9	232
Pinus Canadensis. Lambert, 35	22
Pinus Canariensis. Lambert, 89. Woburn, 21	264
Pinus Cedrus. Lambert, 41	308
Pinus Cembra. Lambert, 23, 24. Lawson, 22. Woburn, 27	295
Pinus Coulteri. Lambert, 82. Woburn, 25, 26	266
Pinus Deodara (*vel* Cedrus). Lambert, 42. Lawson, 9, 14. Woburn, 48	61
Pinus Douglasii. Lambert, 95	24
Pinus Dumosa. Lambert, 35	21
Pinus Excelsa. Lambert, 26. Lawson, 29. Woburn, 29	299
Pinus Fraseri. Lambert, 96. Woburn, 29	205
Pinus Gerardiana. Lambert, 88. Woburn, 19	268
Pinus Grandis. Lambert, 100. Woburn, 43	216
Pinus Halepensis. Lambert, 7. Woburn, 8	236
Pinus Inops. Lambert, 14. Woburn, 4	238
Pinus Insignis. Lawson, 24, 34. Woburn, 18	270
Pinus Jeffreyi. Lawson, 8	272
Pinus Lambertiana. Lambert, 91. Lawson, 3. Woburn, 30	307
Pinus Lanceolata (*vel.* Cunninghamia). Lambert, 37. Woburn, 57	77
Pinus Laricio. Lambert, 4	239
Pinus Larix. Lambert, 38	169
Pinus Leiophylla. Lambert, 86. Woburn, 28	308
Pinus Llaveana. Woburn, 17	274
Pinus Longifolia. Lambert, 22. Woburn, 20	295
Pinus Mandshurica (*vel* Cembra Pygmæa). Lawson, 22	297
Pinus Maritima. Lambert, 6	237
Pinus Massoniana. Lambert, 8	249
Pinus Menziesii. Lambert, 94. Woburn, 32	12
Pinus Microcarpa. Lambert, 40. Woburn, 49	175

		References to Gordon.
Pinus Monophylla.	Lawson, 35	235
Pinus Montezumæ.	Lambert, 87	313
Pinus Monticola.	Lambert, 90. Woburn, 31	314
Pinus Mugho.	Woburn, 2	244
Pinus Muricata.	Lambert, 80	246
Pinus Nigra.	Lambert, 29. Woburn, 34	13
Pinus Nobilis.	Lambert, 97. Woburn, 40	207
Pinus Occidentalis.	Lambert, 22*	315
Pinus Orientalis.	Lambert, 31	15
Pinus Pallasiana.	Lambert, 5. Woburn, 7	247
Pinus Palustris.	Lambert, 21. Woburn, 22	260
Pinus Patula.	Lambert, 84	278
Pinus Pendula.	Lambert, 39. Woburn, 46	177
Pinus Picea.	Lambert, 32. Woburn, 68 (*frontispiece*)	208-9
Pinus Pinaster.	Lambert, 9, 10. Lawson, 33. Woburn, 29	249
Pinus Pinea.	Lambert, 11, 12, 13. Woburn, 10	252
Pinus Pindrow.	Lambert, 99. Woburn, 41	222
Pinus Ponderosa.	Woburn, 15	281
Pinus Pumilio.	Lambert, 2. Woburn, 1	253
Pinus Pungens.	Lambert, 77. Woburn, 5	254
Pinus Radiata.	Lambert, 79	282
Pinus Religiosa.	Lambert, 101	212
Pinus Resinosa.	Lambert, 15. Woburn, 6	256
Pinus Rigida.	Lambert, 19, 20. Woburn, 13	283
Pinus Rubra.	Lambert, 30. Woburn, 35	17
Pinus Sabiniana.	Lambert, 81. Lawson, 16. Woburn, 23, 24	284
Pinus Serotina.	Lambert, 83. Woburn, 16	285
Pinus Sinensis.	Lambert, 76. Woburn, 12	286
Pinus Smithiana.	Lambert, 93. Woburn, 36	19
Pinus Spectabilis.	Lambert, 34	226
Pinus Strobus.	Lambert, 25	322
Pinus Sylvestris.	Lambert, 1	241
Pinus Taeda.	Lambert, 17, 18. Lawson, 23. Woburn, 14	286
Pinus Taxifolia.	Lambert, 36	24
Pinus Teocote.	Lambert, 85	287
Pinus Tuberculata.	Lambert, 78. Lawson, 12	288
Pinus Variabilis.	Lambert, 16. Woburn, 11	238
Taxodium Distichum.	Lambert, 103. Lawson, 40. Woburn, 60	383
Taxodium Sempervirens.	Lambert, 48*	379
Taxus Harringtonia.	Woburn, 66	69
Thuja Dolobrata.	Lambert, 67	398
Thuja Pendula.	Lambert, 50*. Woburn, 63	55
Wellingtonia.	Lawson, 26	414

INTRODUCTION.

The term Coniferæ, or cone-bearing trees, is very expressive of the Tribe to which the present Volume relates.

Regarded from almost every point of view, this Tribe possesses great importance. In the northern regions its members outnumber the common, broad-leaved trees, by about *ten* to *one*; they are most of them distinguished for majesty or symmetrical gracefulness; and their timber, from its length, straightness, and strength, is most valuable in the Arts.

It is in North America that the most extensive Pine forests are located; some of the Pine barrens, as they are there called, being from 300 to 500 miles in extent. Captain Hall states, that while travelling in Georgia, sometimes when he came to a high knoll which overlooked the surrounding country, nothing could be seen but a vast ocean of Pines, stretching without a break in every direction as far as the eye could reach.

Perhaps, however, the most gigantic specimens exist in California, and on the North-west Coast, where the dimensions of some appear almost fabulous. Among these we may mention more particularly Wellingtonia, Sequoia, and Picea nobilis, all of which grow, in favourable situations, from 200 to 300 feet high.

Immense Fir and Pine forests abound also in Sweden, Norway, Russia, Poland, and Prussia; "imagine (says Dr. E. D. Clarke) the Gulf of Bothnia to be surrounded by one continuous unbroken forest, as ancient as the world, and consisting of Pine-trees—then you will have a general and correct notion of a real Pine forest."

In the temperate and northern zones of Europe and Asia, the Conifers enjoy a wide range, extending even to the regions of perpetual snow. In South America, some kinds, such as the Araucarias, differ considerably in general aspect from the true Pines: and still more so in Australia and Polynesia, with respect to the Phyllocladus, the Dammara, and the Dacrydium; but all produce similar timber and secretions. These secretions, which are always in the form of resinous juices, differ much in properties, and may be divided into two classes; those obtained from the living tree by incisions in the bark; and those obtained from the wood and roots after felling, by the application of heat. Among the former are liquid balsam, the common black and yellow resin of the shops, with oil and spirits of turpentine; among the latter are tar, pitch, and lamp-black. The Strasburg and Venice turpentine come from the Silver Fir and Common Larch, and the best yellow resin (so much used in the manufacture of yellow soap) from the Norway Spruce. Olibanum and Sandarac are from the Junipers, and some of the finer resins and gums from the Dammara, Araucaria, and Callitris.

The soil preferred by Pines in a natural state (and therefore the most congenial to them), is that composed of the débris of granitic rock, with a dry subsoil. They will, however, grow anywhere, excepting on chalky formations, and land surcharged with moisture (although some of the American kinds flourish under this latter condition). The Firs (of which class the roots run immediately under the surface) do not require a deep soil, but they will not produce large and fine timber without a sandy loam and cool subsoil.

It would be beyond the purpose on the present occasion to detail all the uses of this important tribe. I may, however, observe, that the yellow deal of Europe is the produce of Pinus sylvestris; the Norway white deal that of Abies excelsa; and the white American pine that of Pinus Strobus. All of these are, besides their other uses, of the greatest value to man in the construction both of his habitation on the earth, and of the arks which bear him and his treasures in safety through the fathomless deep.

The natural Order CONIFERÆ or PINACEÆ is generally divided into three families:—*viz.*, Abietineæ, Cupressineæ, and Juniperineæ; and although attaining, as many of them do, to huge dimensions and great utility as timber trees, they possess an organization inferior to that of other forest trees, and are classed by botanists under the term *Gymnospermæ* (naked seed), because the female flowers have no pericarpal covering, but consist of naked ovules, to which fertilization is communicated directly from the pollen, without the interposition of style or stigma, and which is analogous to the ova of reptiles in the animal kingdom. The male flowers consist of catkins, formed of a number of scales, in the body of which the pollen is contained, in two or more cells, while the female organs, or naked ovules, originate from the large scales of the cones, towards their base.

In the section ABIETINEÆ are placed the *Genus* Pinus, Abies, Picea, Larix, Pseudo-larix, Cedrus, Araucaria, Dammara, Cunninghamia, and Sciadopitys, all of which are timber trees, distinguished by their slender, needle-like, or flat linear and lanceolate leaves, and branches in whorls, the lower ones always dying off as the trees grow old. The leaves and cones also differ essentially in the different Genera. In that of PINUS (the true Pines) the leaves are long, slender, and in bundles of twos, threes, or fives, each set being enclosed at the base in a scaly sheath, and with the fruit a cone, composed of persistent scales. In the *Genus* ABIES (the Spruces) the leaves are solitary, more or less scattered round the shoots, or somewhat two-ranked in their direction, as in the Hemlock Spruce, and with the cones in a drooping position, and composed of persistent scales. In the *Genus* PICEA (the Silver Firs) the leaves are flattened, linear, or lanceolate, white beneath, and mostly arranged on the upper side of the shoots, in a more or less pectinated manner; the cones are erect on the upper side of the top branches, and composed of deciduous scales, which fall off the axis when the seeds are ripe. In the *Genus* LARIX (the Larches) the leaves are linear, soft, rounded at the points, deciduous, and disposed in groups on the adult parts of the tree; the cones are small, erect on the upper side of the branchlets, and composed of loosely-placed persistent scales. In the *Genus* PSEUDO-LARIX (the Chinese Larch) the leaves are long, linear, soft, deciduous, and disposed in tufts, or bundles on the adult branchlets, and with the cones rather large, pendulous, and composed of very deciduous and divergent scales. In the *Genus* CEDRUS (the Cedars) the leaves are in tufts on the adult parts, persistent and evergreen; with the cones erect on the upper surface of the larger branches, and the scales more or less deciduous after the seeds are ripe. From the true Abietineæ Professor Link has, in a very able article on the Genus Pinus, separated the *Genera*, comprising Dammara, Cunninghamia, and Araucaria, into a New family, under the name of DAMMARACEÆ, not only on account of the breadth and expansion of their leaves, but from their containing spiral vessels sufficiently large to be easily perceptible in the leaves, produced on the older wood,* and from the inverted position of the female blossoms.

In the CUPRESSINEÆ all the branches are scattered along the main stem, the lateral ones being densely furnished with slender branchlets clothed with scale-like leaves, mostly imbricated in four rows on the adult plants.

In the JUNIPERINEÆ the fruit is a kind of berry (Galbulus), composed of a fleshy or fibrous juicy substance, covered with a glossy skin, and furnished externally with minute scales.

The TAXACEÆ, or Yew family, although not properly coniferous plants, as they do not bear cones, and have continuous inarticulate branches, the wood of which have ligneous tissue, marked with circular disks, are still classed with coniferæ in all popular enumerations, being considered as of the same character and general habit of growth.

---

* The spiral vessels are very small, and only perceptible in the young shoots of Pinus and Abies.

A NATURAL ARRANGEMENT

OF

ALL THE GENERA ENUMERATED IN THE PINETUM.

Order I. PINACEÆ, the PINE RACE.

TRIBE I. ABIETINEÆ, the FIR TRIBE, having numerous scales, arranged on a more or less elongated axis on the cones, and with the ovules inverted or pointing to the axis.

Sec. I. ABIETINEÆ VERÆ. *Cones* with numerous scales arranged on a more or less elongated axis.

Gen. PINUS, *Linnæus* (the True Pines). *Leaves* in sheaths of two, three, or five, somewhat cylindrical and persistent.

Flowers, male and female on the same plant, but separate.

Cones more or less conical, woody, and composed of scales.

Seeds oval, with a hard, bony shell, and either furnished with an ample wing, or wingless.

1st division, BINÆ, or those kinds having two leaves in a sheath.

2nd division, TERNATÆ, or those kinds having three leaves in each sheath.

3rd division, QUINÆ, or those kinds having five leaves in each sheath.

Gen. ABIES, *Don* (the Spruces). *Leaves* solitary, four-sided, and scattered all round the shoots, or flat, and more or less in two rows laterally.

Flowers, male and female on the same plant, but separate.

Cones pendent, solitary, and terminal, with thin persistent scales.

1st division, VERA, or the true Spruces, with four-sided leaves, scattered all round the shoots.

2nd division, TSUGA, or those kinds with flat leaves, more or less in two rows, like the Hemlock Spruce, and glaucous below.

Gen. PICEA, *Don* (the Silver Firs). *Leaves* solitary, flat, silvery beneath, and pectinated in two or more rows.

Flowers, male and female on the same plant, but separate.

Cones erect, cylindrical or nearly so, axillary on the upper side of the branches, and with thin, deciduous scales when ripe.

1st division, BRACTEATA, or those kinds with the bracteas longer than the scales of the cone.

2nd division, BREVIBRACTEATA, or those kinds with the bracteas shorter than the scales of the cone, and hidden.

Gen. LARIX, *Link* (the Larches). *Leaves* deciduous, linear, soft, and produced in bundles on the adult branches.

Flowers, male and female on the same plant, but separate.

Cones erect, small, oval, or somewhat cylindrical, with persistent thin scales of a leathery texture, with a dorsal bractea.

Seeds small, with a leathery covering and membranaceous wings.

Gen. PSEUDO-LARIX, *Gordon* (the False Larch). *Leaves* deciduous, flat, linear, soft, and collected in bundles on the adult branches.

Flowers, male and female on the same plant, but separate.

Cones pendent, oblong, rather large, brittle, and covered with divergent scales, which are very deciduous, pointed and extended at the apex, and heart-shaped at the base.

Seeds irregularly shaped, with a soft thin covering, and ample wings.

Gen. Cedrus, *Link* (the Cedars). *Leaves* persistent, needle-shaped, somewhat four-sided, stiff, and disposed in bundles on the adult branches.

Flowers, male and female mostly on the same plant, but separate.

Cones erect, ovate, bluntly depressed at the ends, axillary, and growing on the upper side of the branches, with thin, closely-placed scales, more or less deciduous.

Seeds somewhat angular, with a soft tegumental covering, full of turpentine, and ample, persistent wings.

Sec. II. ARAUCARIÆ. *Scales* one-seeded.

Gen. Araucaria, *Jussieu* (the Araucarias). *Leaves* scale-formed, persistent, and widest at the base.

Flowers, male and female on separate plants.

Cones mostly large, globular, and terminal; with the scales deciduous, or partially so.

Seeds more or less attached to the scales.

Sec. I. Columbea, or the true Araucarias, with broad-lanceolate leaves, and seed-leaves germinating under ground.

Sec. II. Eutacta, or False Araucarias, with awl-shaped leaves, and seed-leaves produced above ground.

Gen. Dammara, *Rumphius* (the Wax Pines). *Leaves* broad, flat, petiolated, opposite or alternate, and leathery.

Flowers, male and female on separate plants.

Cones ovate or globular, axillary, and with persistent scales, wanting the dorsal bractea.

Seeds unattached and solitary.

Sec. III. CUNNINGHAMIÆ. *Seeds* free, and from three to seven under each scale.

Gen. CUNNINGHAMIA, *R. Brown.* *Leaves* lanceolate, rigid, and flat.

Flowers, male and female on the same plant, but separate and terminal.

Cones small, ovate or globular, and ligneous, with persistent, acute-pointed scales, having no dorsal bractea.

Seeds, three under each scale.

Gen. ARTHROTAXIS, *Don.* *Leaves* scale-formed or lance-shaped, and either closely inlaying along the shoots, or more or less spreading.

Flowers, male and female on the same plant.

Cones oval, or globular and ligneous, with oval, entire, imbricated scales, destitute of the dorsal bractea.

Seeds, from three to five under each scale, with thin crusty shells and hardly any wings.

Gen. SCIADOPITYS, *Siebold* (the Parasol Pine). *Leaves* linear, flat, persistent, and in whorls.

Flowers, male and female on the same plant, but separate.

Cones elliptic or cylindrical, obtuse at the ends, large and solitary, with wedge-shaped, persistent, thin, leathery scales, regularly imbricated, and furnished with a short dorsal bractea.

Seeds elliptic, compressed, and seven under each scale, with a leathery covering, tapering into a membranaceous wing, attenuating to the base.

TRIBE II. CUPRESSEÆ, the CYPRESS TRIBE. Cones with few valvate or peltate scales on a depressed axis, and ovules erect.

Sec. I. CUPRESSINEÆ. *Cones* with the scales verticillate or decussately disposed.

Gen. CUPRESSUS, *Tournefort.* *Leaves* scale-formed, regularly and closely imbricated in four rows.

Flowers, male and female on the same plant, but separate.

Cones globular, and composed of angular, thick, woody scales, shield-shaped externally.

Seeds numerous, angularly compressed, free and winged on the margins.

Gen. CHAMÆCYPARIS, *Spach.* *Leaves* scale-formed, in opposite pairs, four-rowed, with a gland or sunken groove on the back, glaucous and persistent.

Flowers, male and female on the same plant, but separate.

Cones globular or oblong, small and woody, with mostly seven scales, in opposite alternate pairs.

Seeds convex, hard-shelled, and in twos at the base of the scales, in sunken grooves, and either wingless or very slightly furnished with rudimentary ones.

Gen. RETINOSPORA, *Siebold.* *Leaves* linear or scale-formed, in threes or opposite pairs, mostly spreading and persistent.

Flowers, male and female on the same plant, but separate.

Cones small, globular, woody, and with from five to six opposite pairs of scales, shield-shaped on the top.

Seeds, two at the base of each scale, in grooves, coated with resin, and furnished with membranaceous wings.

Gen. FITZ-ROYA, *Hooker.* *Leaves* in whorls of three, but sometimes in twos and fours, ovate-oblong, flat, without footstalks, and more or less spreading.

Flowers, male and female on separate plants.

Cones, star-like bodies, consisting of nine scales, in whorls of threes, with their edges bent outwards.

Seeds, mostly three under each fertile scale, surrounded by a broad wing, the central one attached to the scale, the other two to the axile.

Gen. DISELMA, *J. Hooker.* *Leaves* small, scale-formed, or ovate-rhomboid, and regularly imbricated in four rows.

Flowers, male and female on separate plants, and terminal.

Cones very small, globular, and composed of four scales, the outer two of which are short and abortive, and the inner two larger and fertile.

Seeds in twos or threes under each of the fertile scales, almost round and amply three-winged.

Gen. BIOTA, *Don.* *Leaves* scale-like, very small, in opposite pairs, flattened, and imbricated in four rows.

Flowers, male and female on the same plant, but separate.

Cones roundish, squarrose, leathery, and composed of from six to eight valves or scales, in opposite pairs, peltated on the top.

Seeds in twos under each scale, crustaceous and wingless.

Gen. THUIOPSIS, *Siebold.* *Leaves* scale-formed, opposite, regularly and closely imbricated in four rows.

Flowers, male and female on the same plant, but separate.

Cones somewhat globular, woody, and composed of eight or ten valvated, smooth scales.

Seeds in fives, at the base of each scale, orbicularly compressed, and furnished with a membranaceous wing on each side.

Gen. THUJA, *Linnæus.* *Leaves* in opposite pairs, compressed, very small, scale-formed, imbricated, and mostly unequal in size.

Flowers, male and female on the same plant, but separate.

Cones ovate-oblong, terminal, leathery, with from four to six scales, in opposite pairs, and unequal in size.

Seeds in twos at the base of each scale, and furnished with transparent wings.

Gen. LIBOCEDRUS, *Endlicher.* *Leaves* scale-formed, in opposite pairs, and imbricated, in four rows, the upper and under ones being much the smallest.

Flowers, male and female on the same plant, but separate.

Cones oval, more or less obtuse, leathery, and composed of from four to six scales, which are but slightly concave on the inner face, and with the lower ones much the smallest.

Seeds singly or in twos under each scale, and unequally two-winged.

Gen. Callitris, *Ventenat.* *Leaves* very small, scale-formed, in alternate opposite pairs, close at the base of the joints, and with a gland on the back.

Flowers, male and female on the same plant, but separate.

Cones globular, or somewhat four-sided, and composed of four valved woody scales truncated at the top, and with the alternate pair smallest.

Seeds, one or two at the base of each scale, slightly compressed, or three-edged, and winged on each side.

Gen. Frenela, *Mirbel.* *Leaves* mostly ternate, scale-formed, and decurrent.

Flowers, male and female on the same plant, but separate.

Cones globular or conical, and formed of six valvated scales, the alternate ones being much the smallest.

Seeds numerous under each scale, more or less angular, and laterally winged.

Gen. Widdringtonia, *Endlicher.* *Leaves* alternate, or in whorls, linear or needle-shaped, and spreading on the branches, but very small, scale-formed, and somewhat imbricated, with a gland on the back, in the adult branchlets.

Flowers, male and female on the same plant.

Cones globular, and composed of four valves or scales, somewhat in a whorl, round a depressed axis, and converging at the sides.

Seeds few, from abortion, and mostly in twos; but with from *five* to *ten* ovules at the base of each scale, in one or two series, with a crustaceous covering, spreading on each side into membranaceous wings.

Gen. ACTINOSTROBUS, *Miquel.* *Leaves* in whorls of three, very small, scale-formed, persistent, and very acute-pointed.

Flowers, male and female on the same plant, but separate.

Cones globular, woody, and composed of six scales, disposed in two vertical sets at the base.

Seeds in twos under each of the upper scales, three-edged, and winged on each side.

Sec. II. TAXODIÆ. *Cones* with the scales spirally disposed.

Gen. GLYPTOSTROBUS, *Endlicher.* *Leaves* scattered, spreading, variously shaped, and trigonal or subulate.

Flowers, male and female on the same plant, but separate.

Cones egg-shaped or oblong, and composed of several unequal-sized scales, all rising from the base, and of a leathery texture.

Seeds in twos and winged, or wingless.

Gen. TAXODIUM, *Richard.* *Leaves* linear, two-rowed, and deciduous.

Flowers, male and female on the same plant, but separate.

Cones globular, woody, and with the scales shield-shaped.

Seeds irregularly shaped, wingless, woody, and in twos.

Gen. SEQUOIA, *Endlicher.* *Leaves* linear, flat, persistent, and spread out in two rows horizontally.

Flowers, male and female on the same plant, but separate.

Cones small, globular, and woody, with peltate, wedge-shaped scales, having a spiny point in the centre.

Seeds mostly in threes under each scale, variously shaped and winged.

Gen. Wellingtonia, *Lindley.* *Leaves* needle-shaped, spiral, and spreading, or scale-formed and imbricated on the adult trees.

Flowers, male and female on the same plant, but separate.

Cones large, obtusely oval, woody, terminal, and solitary, with peltate, wedge-shaped scales, placed spirally at right angles upon the axis.

Seeds narrow, with a blunt point at the apex, and furnished with broad, flat, thickish, oval, pale, membranaceous wings, frequently unequally sided, auriculated at the base, and two lines long, and rather more than one line broad; the seeds are mostly in fives under each scale.

Gen. Cryptomeria, *Don.* *Leaves* irregularly four-sided, sickle-shaped, acute-pointed, scattered, decurrent, spreading, and persistent.

Flowers, male and female on the same plant, but separate.

Cones globular and woody, with peltate, wedge-shaped scales, furnished on the back with broad, recurved, spiny points.

Seeds from three to five, angularly flattened, and winged on the sides.

Tribe III. JUNIPEREÆ, the Juniper Tribe.

Fruit, a globular kind of berry, composed of a fleshy or fibrous juicy substance, covered with a glossy skin, more or less angular, and furnished externally with minute scales.

Seeds hard, bony shelled, either connected together or unconnected, and from one to five in number.

Leaves simple, opposite, or ternate, lanceolate, or scale-formed, and either in extended whorls, or closely imbricated in four rows.

Gen. Juniperus, *Linnæus.* *Leaves* opposite or ternate, lanceolate, or scale-formed, and either in extended whorls, or closely imbricated in four rows.

Flowers, male and female on different plants.

Fruit, a globular berry, furnished with minute scales.

Seeds from one to five, either connected or unconnected internally, and covered with a hard bony shell.

Sec. I. OXYCEDRUS, the True Junipers.

Leaves in whorls of three, spreading, jointed at the base, and glandless on the adult plants, with the buds perulated.

Sec. II. SABINA, the Savin Junipers.

Leaves in opposite pairs, mostly awl-shaped, and loosely imbricated on the adult plants, with the buds naked.

Sec. III. CUPRESSOIDES, the Cypress-like Junipers.

Leaves in opposite pairs, four-rowed, small, scale-formed, and very closely imbricated on the adult plants.

Fruit more or less angular externally.

Order II. TAXACEÆ, the YEW RACE.

TRIBE I. TAXINEÆ VERÆ, the YEW TRIBE.

Fruit more or less drupaceous, and naked on the upper part.

Gen. TAXUS, *Smith.* *Leaves* on short foot-stalks, linear, decurrent, two-rowed, and alternate.

Flowers, male and female on separate plants.

Fruit solitary, and composed of a fleshy open cup, of a scarlet colour, and viscid.

Seeds solitary, nut-like, with a crustaceous shell, free and exposed at the top.

Gen. TORREYA, *Arnott.* *Leaves* linear-lanceolate, decurrent at the base, and either opposite or alternate.

Flowers, male and female on separate plants.

Fruit drupaceous, or fleshy outside, and naked at the point.

Seeds singly in each fruit, with the kernel ruminated like the inside of the common nutmeg, and covered with a hard, smooth, bony shell.

Gen. CEPHALOTAXUS, *Siebold.* *Leaves* linear, alternate, or opposite, and in two rows.

Flowers, male and female on separate plants.

Fruit drupaceous, and two or three in a head.

Seeds solitary, nut-like internally, and with a bony shell, enclosed in a fleshy covering, but naked at the point.

Gen. SALISBURIA, *Smith.* *Leaves* fan-shaped, on long foot-stalks, lobed, or jagged on the margins, and covered on both sides with fan-shaped straight nerves.

Flowers, male and female on separate plants.

Fruit drupaceous, mostly single from abortion, and enclosed at the base in a small fleshy cup.

Seeds solitary, and covered with a hard bony shell.

Gen. PHYLLOCLADUS, *Richard.* *Leaves* minute scale-like bodies on the margins of the branchlets. *Branchlets* leaf-like, opposite, pinnated, or fan-shaped, and feather-nerved.

Flowers, male and female separate, but on the same plant.

Fruit in small connected heads, with a fleshy disk.

Seeds solitary, very small, half enclosed at the base, and nut-like, with a thin shell.

TRIBE II. PODOCARPEÆ, the PODOCARPUS TRIBE.

Flowers monœcious or diœcious.

Fruit drupaceous, seeds inverted.

Leaves linear or lanceolate, and one or many nerved.

Gen. PODOCARPUS, *L'Heritier.* *Leaves* either opposite, alternate, or scattered, linear or oblong, and one-nerved.

Flowers, male and female mostly on separate plants, but sometimes monœcious.

Fruit drupaceous, inverted, and adhering.

Seeds bony shelled.

Sec. I. EUPODOCARPUS, the True Podocarpus.

Leaves alternate, or scattered and linear.

Fruit solitary, with a fleshy receptacle connected with the bracts by the axis of the short spike.

Sec. II. STACHYCARPUS, the Spike-fruited Podocarpus.

Leaves alternate or in two rows, and linear.

Flowers in spikes, provided with bracts, and frequently all abortive, except the upper ones.

Fleshy receptacle wanting.

Sec. III. DACRYCARPUS, the Dacridium-fruited Podocarpus.

Leaves many-formed, and either three-sided or needle-shaped, and in five rows, or spreading, linear, and flat.

Flowers solitary and terminal.

Fruit pendent, almost dupraceous; receptacle fleshy, with the axis of the short spike without bracts.

Gen. NAGEIA, *Gœrtner.* *Leaves* opposite or alternate, and many-nerved.

Flowers monœcious or diœcious.

Fruit axillary, drupaceous, and quite round, with a fleshy receptacle, connected with the bracts by the axis of the short spike.

Seeds covered with a hard thin bony shell.

TRIBE III. DACRYDIÆ, the DACRYDIUM TRIBE.

Gen. DACRYDIUM, *Solander.* *Leaves* needle-shaped or scale-formed, opposite, and imbricated or spreading.

Flowers, male and female on separate plants.

Fruit drupaceous and erect, with a short fleshy disk-like exterior, and bony shell on the seed.

Gen. MICROCACHRYS, *J. Hooker.* *Leaves* very small, ovate or scale-formed, and closely imbricated in four rows.

Flowers, male and female on separate plants, and terminal.

Fruit very small, nearly globular, terminal, bright red, and composed of numerous small, viscid, fleshy scales.

Seeds egg-shaped, solitary at the base of the scales, more or less exposed, and covered with thin bony shells.

Gen. PHEROSPHÆRA, *Archer*. *Leaves* scale-formed, ovate-rhomboid, obtuse, convexly keeled on the back, ciliated on the margins, and closely imbricated in four rows.

Flowers diœcious, or male and female on separate plants; the female ones recurved, solitary, globular, and terminal.

Fruit egg-shaped, erect, and somewhat fleshy.

Scales loosely imbricated, rather fleshy, and boat-shaped.

Seeds oval-oblong, solitary, and covered with a bony shell.

Gen. LEPIDOTHAMNUS, *Philippi*. *Leaves* minute, scale-formed, convex or keeled on the back, thickened at the points, and regularly imbricated.

Flowers diœcious or monœcious, male catkins small, egg-shaped, and terminal.

Fruit solitary and terminal, with few scales, the lower ones the smallest and the fertile ones.

Seeds solitary, pitcher-shaped, naked at the top, and girded at the base by a cup.

TRIBE IV. SAXE-GOTHEÆ, the SAXE-GOTHA TRIBE.

Fruit composed of several consolidated free scales formed into a fleshy cone.

Gen. SAXE-GOTHÆA, *Lindley*. *Leaves* alternate, somewhat two-rowed, flat, and leathery.

Flowers, male and female separate, but on the same plant.

Fruit composed of several consolidated free scales formed into a fleshy cone.

Seeds, a pale brown glossy oval nut, with a short, thin, jagged membrane enveloping the base of the seed.

THE PINETUM.

Gen. ABIES.* *Don.* The Spruce Firs.

Flowers, monœcious, or male and female on the same plant, but separate; the male catkins axillary or terminal, the female ones terminal and solitary.

Cones, pendent, solitary, terminal, and remaining on for a long time.

Scales, persistent, leathery, thin, broadly rounded, and sometimes undulated on the edges.

Seeds, oblong, pointed with a short, stiff deciduous wing, and bony shell.

Bracteas, small and hidden by the scales, or long and trident, like the Douglas Fir.

Seed-leaves, from 7 to 9 in number.

Leaves, solitary, four-sided, acute-pointed, and scattered all round the shoots, or flat and more or less two-rowed, like the Hemlock Spruce.

---

* The name "Abies" is said by some writers to be derived from "Apios," a pear-tree, the cones being like its fruit; while others derive the name from "Abeo," to rise or spring up, in allusion to its aspiring habit of growth, and which Prior so impressively describes in the following lines:

> "There towering firs in conic forms arise,
> And with a pointed spear divide the skies."

All evergreen trees; found in the colder parts of Europe, Asia, and America.

The ancients called the Silver Fir "Abies," and the Spruce Fir "Picea;" but by some inadvertence *Linnæus* reversed the names, and thus created great confusion in their nomenclature. The English and American writers still follow Linnæus, and apply the name *Abies* to the Spruces, and *Picea* to the Silver Firs: while nearly all the French, German, and other continental authors follow *Bauhin* and *Du Roi,* and reverse the terms; applying *Picea* to the Spruces, and *Abies* to the Silver Firs. Pliny called Abies excelsa "Picea," and distinguished it from the Silver Fir, as the "tonsili facilitate," on account of its fitness to be shorn, or clipped into hedges; and Professor Link observes that the true Spruces (Abies) approach nearest to that of *Pinus;* and that upon close inspection still more so than at a first glance. He says, "For instance, if the leaves that stand singly are examined minutely, it will be seen that several of them have their surface grown together, and consequently they are in tufts, like the leaves of the true Pines; and as a proof that this is the case, it will be found that there is no upper surface on the leaves of the Spruces, but that the leaves present only the under-surface on both sides; as will be seen on comparing them with the leaves of the true pines. The seam where the leaves are joined may be distinctly seen, for it forms a line in relief on both sides of the leaves of the common Spruce, which is never the case when such line is formed by the mid-rib, because it is then either on the upper or under side. Some spruces have two leaves grown together, others four; the sheaths at the base of the leaves are not observable, but appear to have grown together in the footstalk." In addition, Professor Link points out the following differences between the leaves of the true Spruces (Abies) and Silver Firs (Picea). The leaves of the Silver Firs, he says, "do not grow together; but are single, and have the usual form of single leaves, the mid-rib being only visible on the under side; the upper one, having a furrow down the centre of the leaf, is flat, divided at the point, and dark green, with two white stripes on the under side, one on each side of the mid-rib, and arranged in two or more rows along the shoots in a more or less lateral position."

Section I. VERA, OR THE TRUE SPRUCES, WITH FOUR-SIDED, NEEDLE-SHAPED LEAVES SCATTERED ALL ROUND THE SHOOTS.

No. 1. ABIES ALBA, *Michaux,* the White Spruce Fir.

Syn. Abies curvifolia, *Booth.*
„ „ glauca, *Mœnch.*
„ Picea alba, *Link.*
„ Pinus laxa, *Ehrhart.*
„ „ glauca, *Mœnch.*
„ „ tetragona, *Mœnch.*
„ „ alba, *Aiton.*

Leaves solitary, incurved, sharp-pointed, glaucous, four-sided, and scattered round the branches; three-quarters of an inch long, and not very thickly set on the branches. Branches compact and rather dense. Cones oblong-cylindrical; 2 or 2½ inches long and rather more than half an inch broad; slightly tapering to the point, pendulous, and not very firm. Scales thin, smooth, and broadly rounded on the upper part; half an inch wide, but much smaller towards the apex or top, regularly overlapping each other, and with entire margins.

A tree with horizontal branches, growing to a height of 50 feet, and seldom more than 1½ feet in diameter, forming a regular pyramid, with very light-coloured bark, and quite a silvery appearance on account of the whiteness of its foliage. Wood inferior to that of any other spruce in quality, but very useful for sheathing the bottom of vessels in lieu of metal, in order to protect the planking from the ravages of the *teredo,* or salt water worm.

It is a native of Canada, New Brunswick, Maine, and Carolina; and even extends to near the Arctic Sea; for, according to Dr. Richardson, it is the most northerly tree that came under his observation on the Coppermine River, within 20 miles of the Arctic Sea, growing there 20 feet high. There are the following varieties:

ABIES ALBA GLAUCA, *Plumbly*, Mr. Dimsdale's Silver Spruce.
Syn. Abies alba argentea, *Hort.*

This very distinct and striking variety has white silvery leaves, and attains to about the same size as the common White Spruce. It was first brought into notice by Mr. Plumbly, in the excellent collection of Conifers belonging to Charles Dimsdale, Esq., at Essenden, near Hatfield, in Hertfordshire.

ABIES ALBA NANA, *Loudon*, the Dwarf White Spruce.
Syn. Picea alba nana, *Link.*
„ Abies alba prostrata, *Hort.*

A dwarf bush, seldom growing more than 3 or 4 feet high, but very dense, and with a very neat appearance.

ABIES ALBA MINIMA, *Knight*, the Hedgehog-formed White Spruce.
Syn. Abies alba echinoformis, *Hort.*
„ Picea alba echinoformis, *Carrière.*

A very diminutive little bush, in general outline very much resembling a hedgehog: thickly clothed with spreading glaucous leaves.

It is the least of all the Spruces, and a singular object of what a timber-tree may become.

No. 2. ABIES ALCOCKIANA, *Veitch*, the Alcock Spruce.
Syn. Pinus Alcockiana, *Parlatore.*
„ „ bicolor, *Maximowicz.*
„ Picea Alcockiana, *Carrière.*

Leaves solitary, six lines long and half a line broad, curved rigid, tetragone, mucronate, and crowded on all sides of the shoots. They are deep green above, somewhat concave, and streaked with glaucous bands below, and on twisted footstalks placed on diamond-shaped cushions along the shoots. Cones solitary or subaggregate, oblong-cylindrical, obtuse at the ends, two inches long and four in circumference. Scales cartilaginous, loose, obtuse-rhomboid, and denticulated on the upper margins. Seeds two lines long, cinnamon-coloured, and with obovate wings four lines long.

A large tree, from 90 to 100 feet high, found on the sacred mountain, Fusi-Yama, in the province of Surunja, on the island of Nippon, in Japan, at an elevation of from 6000 to 7000 feet, where it forms a noble tree, with very small leaves, glaucous, on the under side.

It was first introduced by Messrs. Veitch and Sons, in 1861, and named in compliment to Sir Rutherford Alcock, the British minister at the Court of Yeddo, in Japan.

No. 3. ABIES COMMUTATA, *Parlatore,* Engelmann's Spruce.
Syn. Abies Engelmannii, *Parry.*
„ „ nigra, *Engelmann,* not *Michaux.*
„ Picea Engelmannii, *Engelmann.*

Leaves thickly crowded all round the branchlets, three-fourths of an inch long, four-sided, rigid, smooth, sharp-pointed, and either straight or slightly curved, particularly when young, and of glaucous white colour. Cones solitary, and either horizontal or somewhat declining, ovate, or oblong-cylindrical, obtuse at the ends, and from 2 to 2½ inches long, and 1 inch broad. Scales rather loosely imbricated, somewhat cartilaginous, ovate-rhomboid, subtruncate or emarginate, and with thin crenate or erose margins. Seeds small, oval, and of a brown colour, with short obovate wings.

A pyramidal tree, from 80 to 100 feet high, with the branches in whorls, the lower ones being horizontal, the upper ones more or less ascending, and the branchlets prominently tuberculated when old.

Dr. Parry found it composing almost the entire forest growth of the mountain slopes of the Middle Park above the head of Grand River. A magnificent tree, 100 feet high, with an even columner trunk, from 2 to 2½ feet in diameter at the base, but tapering upwards, and covered with a thin, smooth, scaly bark of a purplish colour. It is also found abundantly on the head waters of the Kettle, Colorado, Missouri, and Columbia rivers; and, according to Dr. Fendler, it extends down to Santa Fé, in New Mexico.

No. 4. ABIES EXCELSA, *D. C.*, the Common Norway Spruce.

Syn. Abies Picea, *Miller.*
„ „ communis, *Hort.*
„ „ Carpatica, *Hort.*
„ „ rugosa, *Hort.*
„ Picea excelsa, *Link.*
„ „ Latinorum, *Bauhin.*
„ „ major prima, *Bauhin.*
„ „ vulgaris, *Link.*
„ Pinus cinerea, *Rœling.*
„ „ excelsa, *Lamarck.*
„ „ Picea, *Du Roi.*
„ „ Abies, *Linn.*

Leaves scattered, solitary, four-sided, deep sombre green, curved, stiff, sharp-pointed, and more crowded together laterally than on the upper and under sides, and nearly 1 inch in length. Branches on young trees nearly horizontal and disposed in regular whorls from the base to the summit; but in old trees the bottom branches drop off, and the others become rather pendulous. Cones produced on the points of the upper branches, and when full grown become pendent; from 5 to 7 inches long, and 1½ to 2 inches in breadth. Scales irregularly, four-sided, or rounded, slightly incurved and rugged, or toothed at the top. Seeds very small, with a wing three-quarters of an inch long. Seed-leaves from 7 to 9 in number.

A fine lofty tree, attaining to the height of 150 feet, or even more in a favourable situation, with a straight trunk, from 2 to 5 feet in diameter, and widely extended branches, spreading regularly on all sides, so as to form a pyramid; timber light, elastic, and not very resinous. It is known under the name of *White Deal*.

The Spruce Fir is very common, and forms forests on the Alps, from east to west, and is principally found at a height varying from 4000 to 6500 feet of elevation, but it sometimes occurs as high as 7000 feet, where it becomes very dwarf; while, on the other hand, it has been found as low as 1000 feet at Tolmezzo in Venice, but nowhere on the whole chain of the Apennines. It is also wanting in a natural state in the countries surrounding the Mediterranean, even on the mountains; but is common in Scandinavia, especially to the east of the mountains; and in the German plains, also from the Vosges in France, to the Carpathians, and on the Pyrenees. It is very common, planted and otherwise, in Norway, Sweden, Lapland, Denmark, the north of Germany, and Russia; and, as invariably happens with a species subject to such a variety of climates and soils, it has many varieties or forms, of which the following are the most striking:—

ABIES EXCELSA PYGMÆA, *Loudon*, the Dwarf Spruce.

Syn. Abies nana, *Hort.*
" " pumila, *Hort.*
" " minuta, *Hort.*
" " minima, *Hort.*

A very diminutive variety, only growing a foot high, but spreading on the ground, and certainly one of the dwarfest of all firs.

ABIES EXCELSA CLANBRASILIANA, *Loudon*. Lord Clanbrasil's Dwarf Spruce.

Syn. Abies Clanbrasiliana, *Loudon*.

A low, compact, round bush, from 3 to 4 feet high, with the leaves less than half an inch in length, found in Ireland.

ABIES EXCELSA BREVIFOLIA, *Cripps.* The Short-leaved Miniature Spruce.

A distinct pigmy Spruce, with very minute leaves.

ABIES EXCELSA DENUDATA, *Hort.*, the Naked or Twig-branched Common Spruce.

Syn. Abies excelsa virgata, *Jacques.*
„ Picea excelsa denudata, *Carrière.*

This variety differs principally from the monstrous form of the Common Spruce, in the lesser branches being more twiggy, spreading, reflected, and a little more divided at irregular distances, and in the leaves being stouter, and lying more closely along the branchlets. It is of French origin.

ABIES EXCELSA ELEGANS, *Loudon*, the Elegant Common Spruce.

Syn. Abies elegans, *Smith.*
„ „ excelsa dumosa, *Hort.*

A dwarf variety, with very slender gray foliage, only growing 4 or 5 feet high, with a very compact pretty appearance.

ABIES EXCELSA EREMITA, *Knight*, the Solitary Red-branched Common Spruce.

Syn. Abies miniata, *Knight.*
„ Picea excelsa eremita, *Carrière.*

A variety with short stout branches, covered with a yellowish red bark, and mostly solitary, or free from laterals; the leaves are short, irregularly four-sided, somewhat two-rowed, from being reverted or bent backwards, and mostly blunt-pointed.

It nearly approaches *Abies excelsa monstrosa*, but is much less branching, and with the bark generally of a much redder colour.

ABIES EXCELSA FINEDONENSIS, *Paul*, the Finedon Hall Spruce.

Syn. Abies Finedonensis, *Hort.*

A striking variety of the Common Spruce, with all the younger leaves on the upper side of the shoots at first of a pale yellow, or straw colour, as well as the young wood; but afterwards, as they get older, they change to a bronzy brown, and finally, when fully matured, become light green; while those leaves on the under side of the shoots and fully shaded branchlets are more or less green from the first.

This variety originated at Finedon Hall, in Northamptonshire, where it came up accidentally in a bed of seedling Common Spruces.

ABIES EXCELSA GREGORYANA, *Paul*, Mr. Gregory's Dwarf Spruce.

Syn. Abies Gregoryana, *Low.*
„ „ Gregoryi, *Hort.*

A very dwarf variety, seldom growing more than 1 or 2 feet high, but with numerous small spreading and somewhat declining branchlets, thickly covered with short, stiff, needle-shaped leaves, placed obliquely all round the shoots, and of the same colour in all parts.

It was raised at the Cirencester Nursery, in Gloucestershire.

ABIES EXCELSA INVERTA, *Smith*, the Inverted-branched Common Spruce.

Syn. Abies inverta, *Smith.*

A pendulous variety of the Common Spruce, in which the leading shoot straightens itself in the old wood, after the manner of the Deodar Cedar, but not so quickly; the lateral branches on old plants are as drooping as the weeping willow; and the leaves are longer, larger, and of a brighter green than those of the Common Spruce, of which it is only an accidental variety, obtained by Mr. Richard Smith, of the St. John's Nursery, Worcester.

This kind appears, according to the drawing of the original tree, distributed by Mr. Smith, to be superior in its more drooping habit to all the other forms of the Pendulous Spruce, of which there are several variations.

ABIES EXCELSA MONSTROSA, *Loudon.*

Syn. Abies excelsa Cranstoni, *Hort.*
„ „ „ horizontales, *Hort.*

A very singular variety, with the branches and branchlets thickened and mostly without laterals, and straggling in all directions.

ABIES EXCELSA MUCRONATA, *Loudon.*

Syn. Abies mucronata, *Rauch.*

A dwarf-growing variety, with short, thick, dark green sharp-pointed leaves, and distorted, irregular branches, rather crowded. It is of French origin, and very distinct.

ABIES EXCELSA NIGRA, *Loudon.*

Syn. Abies Lemoniana, *Booth.*
„ „ gigantea, *Smith.*
„ „ excelsa gigantea, *Hort.*

This only differs from the Common Spruce, in having the leaves of an intense dark green, and stouter, and in the cones being very much longer and broader.

ABIES EXCELSA PENDULA, *Loudon.*

Syn. Abies communis pendula, *Booth.*
„ „ viminalis, *Alstrœmer.*

This only differs from the species in having all its branches and branchlets drooping, and the leaves rather longer.

ABIES EXCELSA PYRAMIDALIS, *Hort.*, the Pyramidal Common Spruce.

Syn. Abies pyramidalis, *Hort.*
„ Picea excelsa pyramidalis, *Carrière.*

This variety differs from the Common Spruce, in having its branches ascending, and frequently as much collected together as those of the Lombardy Poplar.

A striking kind, on account of its compact pyramidal form; of French origin.

ABIES EXCELSA STRICTA, *Loudon*, the Dwarf Conical Common Spruce.

Syn. Abies excelsa conica, *Keteleer.*
„ Picea excelsa conica, *Carrière.*
„ Pinus Picea conica, *Endlicher.*

A very neat dwarf variety, quite conical in shape, and not more than 3 or 4 feet in height, with the branches and branchlets erect and numerous. Leaves slender, very closely compressed, bright green, marked along the sides with glaucous lines, and seldom more than half an inch in length, and terminating in a slender point. It is a very nice, compact variety.

ABIES EXCELSA TENUIFOLIA, *Loudon*, the Slender Spruce.

Syn. Abies excelsa attenuata, *Hort.*
„ „ gracilis microphylla, *Hort.*
„ „ microphylla, *Hort.*

This variety differs in having very thin slender leaves, and attenuated branches, with few branchlets.

ABIES EXCELSA VARIEGATA, *Loudon.*

Syn. Abies excelsa foliis variegata, *Loudon.*

This differs in having some of its leaves, and occasionally some of the lesser branchlets, pale yellow, or whitish in colour, intermixed with the ordinary green foliage of the plant. *Abies excelsa aurea*, recently introduced by Messrs. J. and C. Lee, is probably a richer variety of the above.

No. 5. ABIES JESSOENSIS, *Siebold*, the Jesso Fir.

Syn. Abies microsperma, *Lindley.*
„ Pinus Jessoensis, *Antoine.*
„ Picea microsperma, *Carrière.*
„ „ Jessoensis, *Carrière.*

Leaves, sub-tetragonal or needle-shaped, linear-lanceolate, narrow, straight, spreading, quite entire, and terminated by an acute, spiny, bristle-formed point; they are more or less arranged on the upper side of the branchlets, bright green above, glaucous below, and from three-fourths to an inch long, and three-quarters of a line broad. Branches in horizontal spreading whorls, with the branchlets, when young, cylindrical, straight, smooth, and of a yellowish-brown colour; but when old, rough and tuberculated by the convex cushions of the fallen leaves. Cones, solitary, cylindrical, two and a quarter inches long and three-quarters of an inch in diameter, and as broad at one end as the other. Scales numerous, loosely imbricated, smooth, membranous, oblong-elliptic, toothed at the apex, and irregularly crenated on the margins. Bracteas very small, ovate, and terminating in a spiny mucro. Seeds very small, pale cinnamon-coloured, one line long, with ovate wings two lines long; sometimes acutely notched on the margins.

A tree resembling Abies Menziesii, and from 40 to 60 feet high, with a straight stem covered with an ashy-gray bark, and the branches in horizontal whorls, sometimes inclining downwards at the points.

It is found plentifully in the vicinity of Hakodadi and Matsmai, in the island of Jesso; and at Youkahama, near Kanagawa; and to the south of Yeddo, on the island of Nippon in Japan, where the natives call it *Jezo-Matsu.*

No. 6. Abies Menziesii, *Loudon.* Menzies Spruce Fir.

Syn. Pinus Menziesii, *Douglas.*
„ „ Sitchensis, *Bongard.*
„ Picea Menziesii, *Carrière.*
„ „ Sitchensis, *Carrière.*
„ Abies Sitchensis, *Lindley.*

Leaves solitary, thickly scattered in every direction round the branches, twisted at the base, narrow, rigid, linear, sharp-pointed, incurved, silvery below, and vivid green above, three-quarters of an inch long, and soon falling off after the first season, leaving the branches very naked, warted, and with a jointed appearance. Buds ovate-pointed and covered with resin. Cones 3 inches long and 1 to 1¼ inch broad, pendulous, cylindrical, blunt-pointed, and with the scales loose, and not compact. Scales elliptical, three-quarters of an inch long, and having a shrivelled, brown appearance, with the margin thin, very irregularly toothed or bitten. Bracteas small, and hidden by the scales. Seeds very small and winged.

A tall tree, growing 60 or 70 feet high, with a pyramidal, thickly-branched head, and silvery appearance. Timber of excellent quality.

It is found abundantly in Northern California, and on the island of Sitcha, also growing in the Shasta country, in rather moist situations along the banks of rivers, in deep alluvial soil 100 feet high.

ABIES MENZIESII CRISPA, *Antoine.*

This variety only differs from the species, in having the margins of the scales, on the cones, more undulated or somewhat jagged, and more extended.

No. 7. ABIES NIGRA, *Michaux,* the Black Spruce Fir.

Syn. Abies Mariana, *Miller.*
„ „ denticulata, *Poiret.*
„ Picea nigra, *Link.*
„ Pinus nigra, *Aiton.*
„ „ Mariana, *Du Roi.*
„ „ Marylandica, *Booth.*

Leaves solitary, regularly spreading all round the branches, and somewhat four-sided, very short and stiff, of a sombre dark green, half an inch long, thickly set and erect. Branches horizontal, or very slightly drooping at the ends. Cones pendulous, egg-shaped from 1½ to 1¾ inch long, and nearly three-quarters of an inch broad, deep purple when young, but when ripe of a dusky reddish brown. Scales very thin, rounded blunt, and when ripe undulated or wavy and jagged on the margin. Seeds small, with little stiff wings.

A tall tree, with a rough brown or blackish bark, attaining a height of from 70 to 100 feet, and 2½ feet in diameter, with horizontal branches, and a remarkably straight stem, diminishing regularly from the base to the top. Timber light, elastic, strong, and of a clear yellowish-white colour.

It is found in the coldest regions of North America, but is most abundant in Lower Canada, Newfoundland, New Brunswick, Nova Scotia, in the district of Maine, Vermont, and the upper parts of New Hampshire, in Pennsylvania, on the Black Mountains in South Carolina, and in California. It is the Double Spruce of the Canadians, and the Gum Spruce of the American lumberers, and the tree from which they make spruce beer. It has the following variety :—

ABIES NIGRA PUMILA, *Knight.*
Syn. Abies nigra fastigiata, *Hort.*
„ Picea nigra fastigiata, *Carrière.*

A dwarf variety, growing 3 or 4 feet high, and rather slender, with smaller foliage and a more compact habit.

No. 8. ABIES OBOVATA, *Loudon*, the Obovate-coned Siberian Spruce.

Syn. Pinus Abies, *Pallas.*
„ „ obovata, *Antoine.*
„ Picea obovata, *Ledebour.*

Leaves partially four-sided, more or less curved or straight, closely placed all round the shoots, very slender, stiff, and sharp-pointed; they are bright green on the upper side, pale beneath, and from half to three-fourths of an inch long. Branches numerous, horizontal, and in regular whorls; branchlets mostly opposite, but not unfrequently growing on the upper side of the branch; they are slender, straight, stiff, spreading, dense, and nearly horizontal. Buds small, numerous, bluntly egg-shaped, dark brown, and mostly produced near the points of the shoots. Cones, solitary, subsessile, erect, oblong-cylindrical, obtuse at the apex, 2½ inches long and 1¼ wide. Scales wedge-shaped at the base, rounded on the upper margin, quite entire on the edges, smooth on the bark, concave beneath, loosely imbricated, and nearly three-fourths of an inch long.

A tall tree, resembling the Common Spruce, and in favourable situations growing 100 feet high, but diminishing in stature and foliage according to situation, soil, and elevation, and, like all other coniferous trees from Northern regions, subject to great variation in appearance.

It is found on the Altai mountains and in Siberia, at elevations of from 4000 to 5000 feet.

It is called "Kara-Schersae" by the Tartars on account of its warted branches and close appearance, and is a very different kind from the *Abies Orientalis,* which so frequently is substituted for it in the nurseries. It more resembles the Common Spruce, but with very much smaller egg-shaped cones, which are quite obtuse at the ends, and seldom more than 2½ inches long, by 1¼ wide.

No. 9. ABIES ORIENTALIS, *Poiret,* the Eastern Spruce.
Syn. Pinus orientalis, *Linnæus.*
„ Picea orientalis, *Link.*
„ „ Wittmanniana, *Fischer.*
„ Abies Wittmanniana, *Hartwess.*

Leaves solitary, very dense, partially four-sided, covering the branches on all sides, deep green on both sides, narrow, but not sharp-pointed, half an inch long, and rather stout. Branches straight, slender, and with the leaves all one length along the branchlets. Cones pendulous when full grown, cylindrical, tapering regularly from near the base to the point, which is quite small, 2½ to 3 inches long, and three-quarters of an inch broad at the widest part, which is towards the base. Scales rounded, thin, loosely imbricated, broad near the base but with the upper ones more wedge-shaped, somewhat pointed, narrower, and slightly uneven on the margins. Bracteas shorter than the scales, and enclosed. Seeds very small, and nearly black, with a short but rather broad wing.

A lofty tree, with a straight stem, closely covered with rather stiff branches, growing 70 or 80 feet high, and 1½ foot in diameter, forming a conical-shaped head. Timber excellent and tough.

A native of the coast of the Black Sea, on the loftiest mountains of Imeretia, in Upper Mingrelia and the neighbourhood of Teflis, forming whole forests between Guriel and the Adshar mountains.

It is quite hardy.

No. 10. ABIES POLITA, *Siebold*, the Tiger's-tail Spruce.

Syn. Abies Torano, *Siebold.*
„ „ Thunbergii, *Lambert.*
„ Pinus Abies, *Thunberg.*
„ „ polita, *Antoine.*
„ Picea polita, *Carrière.*

Leaves thickly arranged all round the branchlets, straight or slightly curved, stiff, somewhat four-sided by the prominent mid-ribs on both faces, glabrous, entire, acute or somewhat spiny pointed, and of a glossy green, marked on the under side with several ranges of glaucous stomates, and from three-fourths to an inch long, and three-fourths of a line broad. Cones, ovate or ovate-oblong, rounded at both ends, quite smooth, and from 3 to 4 inches long and 2 inches broad in the widest part; they are solitary and pendulous at the ends of the slender branchlets, and, when young, of a bright green colour, but when fully matured, of a fine deep, chestnut brown. Scales, numerous, persistent, closely imbricated, leathery in texture, with those nearest the base and apex of the cone the smallest; they are obovate, rounded on the upper part, wedge-shaped at the base, entire on the edges, three-fourths of an inch long and the same in breadth, and of a fine chestnut brown.

The seeds are small and nearly black, with thin transparent oblong wings.

A fine graceful tree, resembling Abies Smithiana, from 80 to 100 feet high, with horizontal branches and pendulous branchlets.

It is found on the mountains of Dewa and Matsu, in the northern part of the island of Nippon, in Japan, and constitutes a great part of the woods that are planted about the temples near Youkahama.

The Chinese name for this Fir is "Jo-bi-sjo" (common or native Fir), and the Japanese "Torano-wo-momi" (the Tiger's-tail Fir), on account of the long pendulous branches on old trees resembling the tail of a tiger; they also call it "Siro-momi" (White Fir), in allusion to its timber being light-coloured or almost white.

No. 11. ABIES RUBRA, *Poiret.* The Red or Arctic Spruce Fir.

Syn. Picea rubra, *Link.*
„ Abies rubra Californica, *Hort.*
„ „ Arctica, *Cunningham.*
„ „ rubra Arctica, *Hort.*
„ Pinus Americana, *Gärtner.*
„ „ Americana rubra, *Waugh.*
„ „ rubra, *Lambert.*
„ Abies nigra, *var.* rubra, *Michaux.*

Leaves solitary, very slender, awl-shaped, rigid, sharp-pointed, thickly and regularly scattered all round the branches, somewhat four-sided, half an inch long, and of a glaucous pale green colour. Branches horizontal and slender. Cones oblong, egg-shaped, tapering regularly to both ends, pendulous, about one inch long, and half an inch broad, and of a reddish-brown colour. Scales round, somewhat lobed or divided in the centre of the upper margin, and entire; the middle scales the largest, those near the apex the smallest, and more wedge-shaped. Seeds very small, with short stiff wings.

A tall tree, varying in stature according to soil and situation.

In deep loamy soil, and in a favourable situation, it grows 70 or 80 feet high, while in the cold Arctic regions it becomes a small bush.

It is found in Nova Scotia, Newfoundland, and the more northern parts of North America, as far as the Arctic regions, where it forms the last vestige of arborescent vegetation. Timber, excellent. There is the following variety :—

ABIES RUBRA CŒRULEA, *Loudon.*

Syn. Abies cœrulia, *Loddiges.*
„ „ rubra violacea, *Loudon.*
„ Pinus rubra violacea, *Endlicher.*
„ Picea cœrulea, *Link.*

This is a slenderer and dwarfer variety, growing only six or eight feet high, with bluish-gray foliage, and violet-coloured cones.

No. 12. ABIES SCHRENKIANA, *Lindley.* Schrenk's Spruce Fir.

Syn. Pinus Schrenkiana, *Antoine.*
„ „ obovata Schrenkiana, *Parlatore.*
„ „ orientalis longifolia, *Ledebour.*
„ Picea Schrenkiana, *Fischer.*
„ „ Ajanensis, *Fischer.*
„ Abies Ajanensis, *Lindley.*

Leaves four-sided, quite straight, linear, rigid, very acute, and with pale spiny points; they are bright green, distinctly marked beneath with dotted glaucous lines, and from three-fourths to an inch long, and not very thickly placed round the shoots on raised cushions. Branches subverticillate or irregularly placed along the stem, spreading, and covered with a light yellowish-brown bark. Branchlets rather slender, mostly alternate, not very numerous, and either spreading horizontally or slightly declining, and furnished with prominent oval buds, placed at irregular distances, and when young have the appearance of being almost transparent. Cones solitary, straight, cylindrical, loosely imbricated, from two and a half to three inches long, and nearly one inch in diameter. Scales numerous, obovate, wedge-shaped at the base, rounded or slightly truncate at the apex, smooth on the back, and entire on the edges. Seeds rather small and blackish, with pale yellowish oblong wings.

A tall tree, resembling Abies Menziesii, and in favourable situations growing 80 feet high, but diminishing in stature according to situation, soil, and elevation.

It is found on the Altai Mountains, in Dahuria, Songaria, Kamtschatka, and along the Amoor in Eastern Siberia.

No. 13. ABIES SMITHIANA, *Loudon*, the Indian Spruce Fir.

Syn. Abies Khutrow, *Loudon.*
„ „ Morinda, *Hort.*
„ „ spinulosa, *Griffith.*
„ „ pendula, *Griffith.*
„ Picea Morinda, *Link.*
„ „ Khutrow, *Carrière.*
„ Pinus Khutrow, *Royle.*
„ „ Morinda, *Hort.*
„ „ Smithiana, *Lambert.*

Leaves singly at nearly equal distances around the shoots, mostly four-sided, somewhat curved, from one and a half to two inches long, scattered, and with excessive sharp points. Branches spread out horizontal, those nearest the bottom somewhat bent downwards; lateral ones very numerous, slender, and drooping. Cones pendulous, when fully matured, from four to six inches long, and two inches broad, ovate-oblong, or nearly cylindrical, with very even, brown, obovate, rounded scales, covered with a glaucous bloom when young; the young cones are at first bright green and upright, but from their own weight and the slenderness of the branches, and being terminal, soon become pendulous. Seeds very small and nearly black; wings rather small.

A magnificent tree, found on the lofty mountains of the interior, from Bhotan up to Kafiristan, at elevations of from

7000 to 12,000 feet, and is not only a very superb, but very graceful tree; the boughs ascend a little in the young trees, but are horizontal in the older ones, and from these the branchlets and smaller twigs droop in the most graceful manner. It prefers a north aspect, and attains a great height in favourable situations, frequently from 100 to 150 feet high. Capt. Hodgson measured a fallen tree in 1830, and found the length 169 feet.

This Fir is very common above the Deodar forests, on the mountains of Cashmere, and stretches as far as Gilgit, its most northern habitat as yet ascertained; Dr. Griffith found it as far to the eastward as Bhotan, at elevations varying from 7500 to 10,500 feet, a large and handsome tree. In the Himalayas it is the most graceful Fir met with, on account of its long drooping branchlets and great dimensions, which sometimes measure from 18 to 20 feet in girth, four feet from the earth's surface, and towers 150 feet or more into the heavens; but its wood is soft, open grained, and said, when converted into boats, not to last more than five or six years.

In the Himalayas this Fir is called "Morinda" (Nectar, or honey of flowers), on account of the resinous drops or tears found on the young cones and other parts of the tree, resembling honey. The mountaineers about Simla call it "Rai," "Re," "Rhai," and "Ray-ung;" and the people of Gurhwal, "Realla," "Rhei," and "Rayha," all variations in their dialects for *Fir-tree, Prickly Fir,* and *Wood Pine.* It is also called by the same people, "Roo," "Roo-ee," and "Row;" all signifying to weep or shed tears; either on account of its resinous drops, or the drooping appearance of the full-grown trees. Dr. Royle's barbarous local name, "Khutrow," should either be "Koodrow" (weeping fir), or "Koodrai" (prickly fir), its true vernacular names about Simla, and of which Dr. Griffith's temporary botanical one, *spinulosa*, is a translation. In the Simla jurisdiction it is styled "Row," and "Rai," and in the Kohistan of the Punjab, and in Kooloo, "Koodrow;" but in Kamaon and Gurhwal, "Morinda," and "Koodrai," are its more common appellations.

The Timber is extremely soft, of a white colour, and generally free from knots, but very perishable.

Section II. TSUGA, OR THOSE KINDS WITH FLAT LEAVES, MOSTLY GLAUCOUS BELOW, AND MORE OR LESS TWO-ROWED, LIKE THE HEMLOCK SPRUCE.

No. 14. ABIES BRUNONIANA, *Lindley*, the Indian Hemlock Spruce.

Syn. Abies dumosa, *Loudon.*
„ „ decidua, *Wallich.*
„ „ cedroides, *Griffith.*
„ Pinus dumosa, *Lambert.*
„ „ decidua, *Wallich.*
„ „ Brunoniana, *Endlicher.*
„ Tsuga Brunoniana, *Carrière.*
„ Picea Brunoniana, *Spach.*

Leaves solitary, somewhat in two rows, or scattered along the branches, flat, linear, spreading, obtuse or slightly pointed, minutely toothed towards the apex, reflexed on the margins, and about one inch long, covered below with a milk-white mealiness, and of a bright glossy green above, very easily detached by wind or pressure, and almost deciduous in winter. Branches numerous, slender, and pendent. Cones terminal, an inch long, solitary, without foot-stalks, bluntly oval, pale brown, and furnished at the base with several small oval, opposite, blunt scales. Scales persistent, loosely imbricated, rounded, and smooth on the margins. Seeds small, a little compressed, and angular; wings obtuse, and shorter than the scales.

A fine tree, growing from 70 to 80 feet high, with spreading branches and pendulous brittle branchlets, found in Bhotan proper, occurring from 6500 to 9500 feet of elevation; a large, solitary tree. Dr. Griffith measured one specimen 27 feet in girth, at a height of five feet from the ground. Dr. Hooker found it in Sikkim, forming a narrow belt at an elevation of from 9000 to 10,000 feet, on the south flank of Kunchinjinga, probably the loftiest peak in the world; but in the innermost valleys the limits are from 8500 to 10,500 feet of elevation. In Nepal it is called "Changathasi-Dhoop," a name implying that it is employed for incense.

The Gorkhalees, in Nepal, call this tree "Thingia" (Yew), or "Thingoori-Sulla" (fragrant Yew), and the Bhotiyas, "Semadoong," which has a similar meaning; but, according to Professor Don, it is better known under the name of "Silloo-Haterhee" (fragrant Fir), and found plentiful on the mountains of Gosainthan, in Nepal, where its bark is much used for the covering of sheds and out-houses.

It is by far the handsomest of all the Indian Firs in a native state; but its timber is of a very inferior quality, and soon perishes if fully exposed to the weather.

It is hardy, but suffers greatly from the late spring frosts.

No. 15. ABIES CANADENSIS, *Michaux,* the Hemlock Spruce.

Syn. Pinus Canadensis, *Willd.*
„ „ Americana, *Du Roi.*
„ „ Abies Americana, *Marsh.*
„ Picea Canadensis, *Link.*
„ Tsuga Canadensis, *Carrière.*

Leaves solitary, flat, and irregularly disposed in two rows, from half to three-quarters of an inch long, downy when young, rough at the margins, blunt-pointed, bright, vivid, light green on the upper surface, and with two silvery stripes underneath on each side of the mid rib. Branches numerous, slender and downy when young, spreading, and rather flat. Cones pendulous on the extremities of the branches, from five-eighths to seven-eighths of an inch long, and three-eighths of an inch broad, of an oval shape, green when young, but brown when ripe. Scales roundish, smooth, entire on the margins, and few in number. Seeds small, light brown, with wings a quarter of an inch long, and nearly white. Bark smooth and light-coloured.

A bushy-headed tree, growing in its native country from 60 to 80 feet high, with a straight stem, of a uniform size, for two-thirds of its height.

The wood is less valuable than any of the other resinous trees in North America, but the bark is inestimable for the purposes of the tanner, and spruce beer is made from the branches.

It is found in the most northern regions of Canada, and on the highest mountains, as far as South Carolina. Michaux says it begins to appear about Hudson's Bay, the Lake of St. John, and in the neighbourhood of Quebec, and that it fills the forests in Nova Scotia, New Brunswick, Maine, Vermont, and the upper part of New Hampshire, in company with the Black Spruce, where it constitutes three-fourths of the evergreen woods. There are the following varieties, viz.:—

ABIES CANADENSIS NANA, *Lawson.*

Syn. Tsuga Canadensis nana, *Carrière.*

A dwarf variety, not growing more than two or three feet high, and spreading on the ground with a more tufty foliage.

ABIES CANADENSIS GRACILIS, *Waterer*, the Slender Hemlock Spruce.

Syn. Abies Canadensis microphylla, *Hort.*

This is a very singular-looking variety of the Hemlock Spruce, on account of its slender shoots, thin appearance, and small foliage. The leaves are linear, blunt-pointed, glossy above and glaucous below; more or less obliquely placed all round the shoots, and seldom more than three lines long. Branches and branchlets very slender, little divided, more or less drooping at the ends, and rather thickly covered with the small, obliquely-placed leaves.

A very distinct and singular-looking variety, raised in the Nursery of Messrs. Waterer and Godfrey, at Knaphill, in Surrey.

No. 16. ABIES DOUGLASII, *Lindley*, the Douglas Fir.

Syn. Abies Californica, *Don.*
„ Picea Douglasii, *Link.*
„ Pinus Douglasii, *Sabine.*
„ „ taxifolia, *Lambert.*
„ Tsuga Douglasii, *Carrière.*
„ Abies mucronata, *Rafinesque.*
„ „ obliquata, *Rafinesque.*

Leaves solitary, flat, entire, narrow, linear, spreading and irregularly two-rowed; from one inch to one and a half long, bluntly pointed, bright green above and slightly glaucous, and much paler below. Branches numerous, irregularly placed along the trunk, spreading horizontal, sometimes a little ascending, very twiggy, and nearly flat; branchlets long, slender, mostly in two rows, and more or less declining. Cones ovate or oblong, terminal at the points of the upper branchlets, solitary, pendulous, yellowish brown, with many linear, extended, sharp-pointed bracteas, loosely imbricated; from two to three inches long, and rather more than one inch in diameter. Scales rounded, smooth, leathery, concave, quite entire, thin, and persistent, or not falling off after the seeds are ripe. Bracteas, linear, three-pointed, the middle one much the longest, the two outer ones being very short, membranaceous, but twice as long as the scales, and not reflexed. Seeds very small, with the wings little more than a quarter of an inch long.

A large conical tree, with smooth bark; when young, full of turpentine; but when old, with a rugged, grayish-brown bark, from 12 to 14 inches thick, and attaining in its native country, under favourable circumstances, to a height of from 150 to 200 feet, and from two to ten feet in diameter.

The trunk of this Fir for two-thirds of its diameter in the centre presents a reddish colour, and yields but little resin or turpentine, but excellent timber; while the remainder or outer part is white, porous, tough, and not very durable.

It is called "Sas-coo-pas" and "Paps" by the Indians along the Columbia River and on the N. W. coast of America, and which signifies, in their dialects, *Big tree* and *Great fir*. Professor Rafinesque mentions a variety of the Douglas fir, under the name of Abies mucronata, *var.* palustris, as having been found by Lewis and Clark, during their exploratory expedition in the Oregon country, growing in low or marshy grounds, only 30 feet high, but with spreading branches and a stem two feet in diameter.

It is found in immense forests, in the north-west part of America, and at different elevations on the Rocky Mountains, forming a small dense little bush not a yard high, at the top of those mountains, but becoming larger and more stately as it descends the sides, and finally it becomes those mighty giants, eight or ten feet in diameter, and from 150 to 200 feet high, in the lower valleys, at the base of the same range, and along the banks of the Columbia River. It is also found abundantly in California, and the following variety in Mexico :—

Abies Douglasii taxifolia, *Loudon.*

Syn. Abies Drummondii, *Hort.*
„ „ taxifolia, *Drummond.*
„ „ Douglasii Mexicana, *Hartweg.*
„ „ „ brevibracteata, *Antoine.*
„ Tsuga Lindleyana, *Roezl.*

This very distinct variety has much longer leaves, and of a deeper green than the species, with the cones much shorter, but broader and less pointed ; the extended bracteas are also much shorter, and not much longer than the scales.

A handsome small tree, growing from 30 to 40 feet high, with horizontal branches and straight branchlets, little forked, found on the Real del Monte mountains, in Mexico, at an elevation of from 8000 to 9000 feet, and in the Oregon country.

Abies Douglasii fastigiata, *Knight.*

A variety with its branches ascending, and much more conical and compact in its outline than the species.

ABIES DOUGLASII STANDISHIANA, *Gordon.* Mr. Standish's Douglas Fir.

Leaves linear, flat, and rather distantly placed, more or less spirally all round the young shoots, but finally on the more adult ones somewhat irregularly arranged horizontally in two rows, pointing more or less obliquely outward, and from one inch to one and a half long, and about three-quarters of a line broad; they are nearly all of an equal length along the shoots, and blunt-pointed, except those nearest the ends of the principal shoots, which are somewhat acute; but all of them are of a dark glossy green, and channelled along the mid-rib on the upper surface, and with two sunken, silvery white, or glaucous bands below, between the thickened mid-rib and reflected margins, both of which are of a bright, glossy green, and tapering into a short, stout, more or less twisted footstalk inserted in a little shallow, but somewhat elevated circular socket at their base. Buds few, scattered along the upper part of the shoots, and placed singly at the points, bluntly oval, and covered externally with broad, ciliated, or fringed scales of a dark brown colour, and free from resinous matter. Branches rather numerous and irregularly placed along the main stem, spreading, and with the points somewhat elevated; leading shoots long, rather stout, and twig-like. Branchlets few, rather long, straight, and more or less in two rows, placed somewhat obliquely along the principal branches, those of the weaker ones being a little declining, and jointed at the junction of each successive growth. Bark on the younger parts smooth, ashy-gray, and furnished with numerous blisters filled with resinous matter, similar to that on the Douglas Fir. Cones unknown.

This very remarkable kind was first observed by Mr. Standish in his Nursery at Bagshot, growing amongst some seedling Abies Douglasii raised from English saved seed, gathered from a Douglas Fir growing in close proximity to some large Silver Firs.

The original plant, which, in 1861, was 10 or 12 feet high, and about as many years old, had quite the habit and general outline of Abies Douglasii, and of which it appeared to be either an accidental seedling variety, or probably a hybrid between that kind and the Silver Fir (Picea pectinata), as its general appearance and history would seem to indicate.

It is a fine and distinct kind, on account of its large, dark, glossy green foliage, which is quite silvery below, and as large as those of the common Yew. The original tree is quite hardy, not being in the least injured by the severe winter of 1860-1, although in an open and fully exposed situation in the Royal Nursery at Bagshot.

ABIES DOUGLASII PENDULA, *Parlatore.*

Syn. Abies taxifolia pendula, *Hort.*

This variety only differs in having its secondary branches and shoots pendulous.

ABIES DOUGLASII STAIRII, *Hort.*

This is a nice variegated variety, which originated at Castle Kennedy, the Earl of Stair's residence in Scotland. It was described in the *Gardener's Chronicle*, Nov. 18, 1871, and in the *Garden,* Nov. 23, 1872, as a veritable silver or almost a pure white spruce. It appears, however, to partially lose its silvery appearance towards winter.

No. 17. ABIES FORTUNEI, *Lindley,* the Intermediate Fir.

Syn. Abies Jesoensis, *Lindley.*
„ Picea Fortunei, *Murray.*
„ „ Jesoensis, *Carrière.*
„ Pinus Fortunei, *Parlatore.*
„ Keteleeria Fortunei, *Carrière.*

Leaves solitary, not very thickly placed, somewhat two-rowed, or spirally arranged round the shoots, persistent, spreading, and remaining on the branches for several years; from one to two inches long, and from one line to one and a half broad, linear-lanceolate, tapering to a sharp point, straight or very slightly falcate, smooth, flat, and glossy, of a light yellowish-green on the upper surface, a little paler beneath, but not glaucous, and with a projecting rib along the middle on both faces, especially along the upper one, where it is very sharply elevated and terminated by a long slender point, frequently of a dark brown colour in the adult leaves, which are very entire and sessile. Buds small and surrounded by long slender scales. Branches in whorls, slender and horizontal, with the lower ones frequently bent downwards at the ends, and the laterals quite straight, slender and stiff. Shoots smooth, of a rusty brown, and somewhat downy by the numerous short hairs on their surface, particularly when quite young. Cones erect, somewhat terminal, on longish foot-stalks, cylindrical, abruptly tapering at the point, quite straight, rather narrow, and of a beautiful violet-purple when young, but purplish-brown when fully matured, and from six to seven inches long, and from one and a half to two inches in diameter. Scales numerous, very broad, concave, rounded at the edges, irregularly crenated on the margins, smooth, thin, rather loosely placed, but persistent, nearly equal in size, and from one inch to one and a quarter long, and the same in breadth. Seeds half an inch long, angular, soft, and full of turpentine, like those of the Piceas; wings permanent, short, but broad, with the inner side straight, and the outer one rounded.

A large tree, 60 feet high, with a straight stem, covered with a smooth ashy-gray bark, a little cracked outside, and a flat, wide spreading head, like that of an old Cedar of Lebanon.

It was first introduced by Mr. Fortune, who found it planted about temples at Foo-chow-foo, in the north of China.

Much difference of opinion exists respecting whether this kind is a Spruce, a Silver Fir, or a new genus; and which arises from its having erect, cylindrical cones, with persistent scales, soft angular seeds, full of turpentine, and permanent wings, and flat, linear-lanceolate leaves, somewhat spirally arranged on the young shoots, and more or less two-rowed on the adult parts; from all of which it would seem to be intermediate between the two, but having persistent scales on the cones, it must be considered as belonging to the Spruces rather than the Silver Firs.

No. 18. Abies Mertensiana, *Lindley*, the Californian Hemlock Spruce.

Syn. Abies heterophylla, *Rafinesque.*
„ „ taxifolia, *Jeffrey.*
„ „ Canadensis taxifolia, *Gordon.*
„ „ Albertiana, *Murray.*
„ „ Bridgesii, *Kellog.*
„ Pinus heterophylla, *Endlicher.*
„ „ Mertensiana, *Bongard.*
„ Picea Mertensiana, *French Gardens.*
„ Tsuga Mertensiana, *Carrière.*

Leaves solitary, linear, somewhat in two rows, flat, and channelled on the upper side, tapering to the base, with a very short foot-stalk, and somewhat obtuse at the point, from one half to three-quarters of an inch long, and rather more than half a line broad in the larger ones, but very unequal in size, some being very long, while others are very short, and intermixed on the same shoot, of a very pale green colour, slightly glaucous below, and thickly placed on the branchlets. Branches very numerous, slender, and more or less bent downwards at the ends. Branchlets very slender, flexible, long, drooping and rather downy when young, but much tuberculated when old from the falling leaves. Cones solitary, ovate, blunt at the ends, three-quarters of an inch long, without any foot-stalks, and pendulous at the ends of the shoots. Scales entire, kidney-shaped, smooth, few in number, and very persistent. Seeds very small, light brown, and furnished with ovate wings, half an inch long.

A handsome, bushy, round-headed tree, growing from 100 to 150 feet high, and from four to six feet in diameter, with a straight, round stem, tapering upwards, with rather a thin and smoothish bark.

A large tree, found abundantly in California and the Oregon Territory, with a thin, dark-coloured bark, much divided by small longitudinal fissures on the stems of old trees, but somewhat smooth on the younger ones. It is called "Lucatzin" by the Indians in California. The timber is soft, white, and difficult to rive or split.

No. 19. ABIES PATTONIANA, *Jeffrey,* Patton's Californian Fir.

Syn. Abies gracilis, *Hort.*
,, ,, Williamsonii, *Newberry.*
,, ,, Hookeriana, *Murray.*
,, Picea Californica, *Carrière.*
,, Tsuga Hookeriana, *Carrière.*

Leaves solitary, alternate, thickly scattered on all sides of the branches, petiolate, trigone, stiff, curved, acuminate, and rather blunt-pointed, three-quarters of an inch long, and nearly one-tenth of an inch broad, triangular, a little declining, and springing from a small triangular pedestal of soft, spongy, elastic bark at the junction with the shoots; bright green above and glaucescent beneath; buds irregularly scattered along the twigs, terminal ones very scaly, pointed, and destitute of resin, the bud scales continuing to encircle the twigs for years afterwards. Branches and young shoots densely covered with a brown woolly substance, and rough, scaly bark, slender, and rather drooping. Cones, oblong-cylindrical, tapering slightly to both ends, smooth externally, from two inches to two and a half long and one inch broad, pendulous, crowded, and produced at the points of the top branches, and when ripe of a light brown colour. Scales rounded, thickest in the centre and thin on the edges, entire, or somewhat wavy on the margins, very numerous, nearly all of a size, five-tenths of an inch broad, and rather loosely placed. Seeds very small, with rather broad wings, a quarter of an inch long. Stem straight, with numerous slender drooping branches, not very prolific at the extremities. Bark, rough, scaling off in irregular flakes, and of a reddish brown colour, particularly on the young shoots. It yields but little resin, but the timber is hard, fine-grained, and of a reddish colour.

The Abies Pattoniana occupies the most elevated parts of the Sierra Nevada, and seldom descends lower down than 100 yards from the line of perpetual snow, where in moist situations it forms a tree from 100 to 130 feet high, with a trunk sometimes three feet in diameter. Its branches spread out horizontally from the main stem, but become drooping towards the extremities, and with the branchlets thickly set round with solitary leaves about two-thirds of an inch long, grass green above, and pale green beneath, with those towards the points of the branchlets spreading, and silvery white below. The cones are about two inches long, and one in diameter, in the widest part; when young, dark purple, but when old, pale brown. Male flowers, or catkins, two-eighths of an inch long, and of a violet colour, The timber is of a reddish colour, close, and fine-grained, and remarkable for its strength and durability, and as an ornamental tree for parks or pleasure grounds, or for general planting, no tree can be more recommendable; and, judging from the soil and situation in which it grows, it may be considered the hardiest of all the Californian kinds.

Mr. William Lobb found it in abundance on the highest peaks of the Sierra Nevada, near the head waters of the north tributary of Feather River, and more to the south, towards Lake Bigler; forming immense trees, in habit of growth and general appearance much resembling the "Deodar," but the Pattoniana being more thickly branched, and densely clothed with foliage, is by far the handsomest tree.

Mr. Jeffery, who discovered it on the Mount Baker range, in Northern California, describes it as a noble tree, rising to a height of 150 feet, and 13½ feet in circumference, and towering above the rest of the forest, but as it ascended the mountain, it got gradually smaller, till at last it dwindled down into a shrub not more than four feet high. It is found at elevations of from 5000 to 6000 feet, on Cascade Mountain, and on Mount Baker range, in Upper California.

It is quite hardy, and has been named by Jeffrey, in compliment to Mr. Patton, of the Cairnies, in Scotland, a gentleman much interested in conifers.

No. 20. Abies Tsuga, *Siebold,* the Japan Hemlock Spruce.

Syn. Pinus Tsuga, *Antoine.*
„ „ Araragi, *Siebold.*
„ Tsuga Sieboldii, *Carrière.*
„ Micropeuce Sieboldii, *Spach.*
„ Abies diversifolia, *Hort.*
„ „ Araragi, *Loudon.*
„ „ Hanburyana, *Hort.*

Leaves solitary, somewhat two-rowed, thickly set on the branches, frequently alternate, lower ones reflected, and on short, round foot-stalks; they are flat, slightly linear, and tapering to an obtuse (rarely acute) point, entire on the edges, smooth, dark shining, green above, ribbed, and marked beneath with two white glaucous bands. Branches numerous, irregularly spreading, and drooping at the ends. Branchlets slender, recurved, and irregularly furnished with small buds. Cones very small, solitary, terminal on the ends of the branchlets, one inch long, and three-quarters of an inch broad, elliptic, blunt-pointed, and remaining on the tree after the seeds have fallen out. Scales permanent, imbricated, 20 or 30 in number, leathery, shut close, largest in the middle, slender at the base, partially rounded or obtuse on the apex, thin, and of a shining pale brown colour. Bracteas very short, hardly longer than the foot-stalk of the scale, narrow, truncate, and irregularly bifid. Seeds very small, with thin membraneous wings.

A large tree, from 80 to 100 feet high, with the appearance and habit of the Hemlock Spruce (Abies Canadensis), but with the timber of a yellowish colour, and much valued by the Japanese.

It is found in the northern provinces of Japan, on the mountains of "Matsu" and "Dewar," at an elevation of 6000 feet, and on the sacred mountain, "Fusi-Yama," which is the highest mountain in Japan (14,000 feet), and whose sides are covered with dense pine forests, chiefly composed of this kind, to an elevation of 8000 or 9000 feet.

The Japanese names for this Fir are, "Tsuga" (Yew-leaved) and "Araragi" (Yew-like). It is much used in Japan for planting round sacred temples, on account of its graceful appearance. There is the following variety:—

ABIES TSUGA NANA, *Siebold,* the Dwarf Tsuga Spruce.

This forms a little bush, seldom more than a yard high, with much smaller and shorter leaves than the species. It is much cultivated in pots, in their town gardens, by the Japanese, who call it "Hime," or "Fime Tsuga" (the dwarf yew-leaved Spruce).

NEW OR DOUBTFUL SPECIES OF ABIES.

ABIES MAXIMOWICZII, *Newmann,* Maximowicz's Spruce.

Of this kind very little is known, except that the young plants in cultivation are very like those of Abies Alcockiana.

Gen. ACTINOSTROBUS. *Miquel.*

Flowers, monœcious, or male and female on the same plant, but separate and terminal; the male catkins egg-shaped, or somewhat globular, the female ones solitary and globular.

Cones, somewhat globular, solitary, and composed of six scales, disposed in two vertical sets at the base, and woody.

Valves or Scales, convex on the back, those at the base much the shortest, with the interior ones much the largest.

Seeds, in twos, under each of the upper scales three-edged, and winged on each side.

Seed-leaves, in twos.

Leaves, persistent, scale-formed, very small, in whorls of three, stiff, and very acute pointed.

Name derived from *ακτις* (aktis), a ray, and *στροβος* (strobus), a cone; the scales radiated.

Pyramidal bushes, found on the south-west coast of New Holland.

No. 1. ACTINOSTROBUS PYRAMIDALIS, *Miquel*, the Pyramidal Swan River Cypress.

Leaves in threes, vertical, very small, scale-formed, three-cornered, ovate, acute-pointed, rigid, decurrent at the base, and slightly spreading at the points. Branches alternate, ascending, slightly spreading out at the extremities, very numerous, long, and slightly angular. Branchlets dense, dark-green, and having no particular direction; younger ones covered with spinescent leaves, partially imbricated; the adult ones stand out stiff, while those on the cone bearing lateral ones are scale-formed, very short, and entirely cover the stem. Cones solitary, somewhat globular, composed of six scales, in opposite pairs; those at the base much the shortest, and the interior ones much the largest. Scales convex on the back, sharply ribbed, woody, and without any terminal sharp-point. Seeds, in twos, under each of the upper scales.

A dense, narrow, pyramidal bush, growing six feet high, with ascending branches, and dark green branchlets, found growing in the Swan River Colony, along the sea-shore, where it is brackish from being inundated, and along the south-western coast of New Holland.

It is not hardy.

No. 2. ACTINOSTROBUS ACUMINATUS, *Parlatore*, the Acuminate Swan River Cypress.

Leaves on the principal branches and branchlets in threes, about one-third of an inch long and half a line broad, with the base decurrent and the upper part free, erectly-spreading, linear, acute and somewhat spiny pointed, the upper surface tolerably flat, the under one convex and keeled, and the margins rough. Cones solitary, and produced at the ends of the short, erect branchlets; they are ovate-pointed, and composed of six scales in opposite pairs, all connected at the base on a very short column, and nearly three-quarters of an inch long, half an inch wide, and of a chestnut brown colour. The scales are in sixes, nearly equal in size, and connected at the base on a very short axis, the lower ones are oblong-acute and erect, and the upper ones narrow, spreading, and with acute spiny points; the seeds are in twos under each of the upper scales, and either two or three winged.

A low, erect, branching shrub, found at the Swan River Colony, in Western Australia, and not hardy in England.

Gen. ARAUCARIA. *Jussieu.*

Flowers, diœcious, or male and female flowers on different plants.

Cones, globular, and terminal.

Scales, deciduous, or partially so.

Seeds, more or less attached to the scales.

Leaves, scale-like, persistent, and widest at the base.

Name, derived from Araucanos, a people of Chili, in which country Araucaria imbricata abounds, and where its seeds furnish a great portion of the food of the Indians.

The Araucarias differ from the true Pines and Firs in having the sexes on separate trees; in the scales on the cones being one-seeded, and in the seeds being more or less attached to the scales. They, however, approach nearest to the Genus Dammara, in being diœcious; but differ from them in the form of the leaves and scales on the cones; also in having bracteas to each female flower, and in the seeds being more or less attached to the scales, and not free, as in the Genus Dammara.

Section I. COLUMBEA, *Salisbury,* OR THE TRUE ARAUCARIAS.

Cones very large; scales slightly winged and deciduous; seeds indistinctly attached at the base. Seed-leaves from two to four, and germinating under ground. Leaves, on young plants, unequally formed.

They are all large trees, natives of America and Australia.

No. 1. Araucaria Bidwillii, *Hooker*, Mr. Bidwill's Araucaria.

Syn. Colymbea Bidwillii, *Carrière.*

Leaves ovate-lanceolate, rigid, flat, deep-green, shining, and spiny pointed, generally forming two rows along the branchlets, and without any foot-stalks; narrow, and nearly two inches long on the young plants, but much shorter and broader on the more mature plants, and not more than three-quarters of an inch long; those on the stem alternate, those on the branchlets somewhat two-rowed. Branches in regular whorls, from five to seven in number, but frequently more on the adult trees; they are horizontal, with those near the base sometimes deflected and not more than 12 feet in length on old trees. Branchlets in opposite pairs, about 18 inches long, slender, and rather thinly covered with flat, distant, sharp-pointed leaves. Cones, ovate-globular or oblong, about nine inches long; sometimes nearly as broad, and a little depressed at the ends. Scales large, projecting, with an acute, transverse ridge across the centre, highest in the middle, and furnished with a sharp-pointed reclining hook at the extremity. The scales are from one to two inches broad, and from half to three-quarters of an inch thick, loosely adhering, and very deciduous when the seeds are ripe. Seeds very large, from two to two and a half inches long, by three-quarters of an inch broad, terminating at the apex in short callous marginal wings, furnished with long, flat, tapering, curved points, more than an inch long. Nuts eaten by the aborigines.

A majestic tree, with a very straight cylindrical trunk, growing from 100 to 150 feet high.

It is found on the Brisbane mountains and in the neighbourhood of Moreton Bay, in Australia. Mr. Bidwill, after whom it was named, describes it as overtopping the forests, with a clear, smooth, blackish trunk, and depressed, loose, conical head and that the timber is very fine, close-grained, and very durable.

It is the "Banza-tunza," or "Banya-tunya," of the natives, and is not hardy.

No. 2. ARAUCARIA BRASILIENSIS, *Richard*, the Brazil Araucaria.

Syn. Pinus dioica, *Arrabida*.
„ Colymbea angustifolia, *Bertoloni*.
„ „ Brasiliensis, *Carrière*.

Leaves linear, lanceolate, quite straight, and entire; loosely imbricated, and tapering to a very sharp point; from one to two inches long, and a quarter of an inch broad, scattered all round the leading shoots, and spreading; the older stem ones imbricated the reverse way, and remaining on after they become brown, broadest at the base, decurrent, and frequently a little twisted at the base, young ones keeled and glaucous below, light green and shining above. Branches, numerous, mostly in horizontal whorls, lower ones declining, and partly covered with the adult leaves, upper ones ascending, and only divided towards the extremities; branchlets slender, leafy, spreading, undivided, and bending gracefully downwards, the lower ones soon turning brown and falling off. Cones very large, globular, sometimes slightly depressed at the extremities, solitary on the tops of the branches, erect, and without any foot-stalks, six inches long, nearly the same in diameter, and of a yellowish brown colour. Scales thick, compressed, wedge-shaped, oblong, four-sided, and closely placed together, of a firm, corky texture, each terminating in a lanceolate, acute, recurved spine, hollow within at the base on the upper side, and covering a monospermous nut, two inches long, covered with a smooth reddish-brown leathery skin. Seeds very large, oblong, eatable, and without any winged appendage.

A very handsome pyramidal tree, growing from 70 to 100 feet high, with a straight stem, covered with tolerably smooth bark, except near the upper part, where the leaves still adhere in a reclining, imbricated position.

It forms immense forests between the province of Minos Geraes and Soam-Paulo, to the north of Rio de Janeiro; the nuts, which have very little resin in them, are sold as an article of food in the markets of Rio, and the fragrant resin which exudes from the trunk of the tree is mixed with wax to make candles.

Its Brazilian name is "Curi."

It is tender, and has the following varieties:

ARAUCARIA BRASILIENSIS RIDOLFIANA, *Savi.*

Syn. Araucaria Ridolfi, *Hort.*
„ „ Lindleyana, *Van Houtte.*
„ „ Ribbiana, *Italian Gardens.*
„ Colymbea Brasiliensis, *Carrière.*

This variety is more robust, and with larger and longer leaves, and, according to Count Ridolf, is very distinct when old.

It is found on the higher mountains about Rio, and is hardier than the species.

ARAUCARIA BRASILIENSIS GRACILIS, *Carrière.*

Syn. Araucaria elegans, *Knight.*
„ „ gracilis, *Van Houtte.*

Leaves, when old, bright green, but when young somewhat glaucous; they are linear-lanceolate, rather dense, and less rigid, but much narrower than those of the species. Branches slender and spreading; branchlets undivided and bent downwards at the ends.

This variety somewhat resembles Cunninghamia Sinensis, and is much smaller and slenderer than the original form of the species.

ARAUCARIA BRASILIENSIS SAVIANA, *Parlatore.*

Syn. Araucaria Saviana, *Parlatore.*

Leaves, when young, somewhat glaucous, and when old large, linear-lanceolate, closely placed, and more or less turned backward. Cones very large, and globose or somewhat oval; scales broad, with long, linear-lanceolate, recurved, spiny points.

It is said to be a native of the mountains of Bolivia, and to be much hardier than the species, which is found in Brazil.

No. 3. ARAUCARIA IMBRICATA, *Pavon,* the Chili Pine or Monkey Puzzle.

Syn. Araucaria Chilensis, *Mirbel.*
„ „ Dombeyi, *Richard.*
„ Abies Columbaria, *Desfont.*
„ „ Araucana, *Poiret.*
„ Columbea quadrifaria, *Salisbury.*
„ Colymbea imbricata, *Carrière.*
„ Dombeya Chilensis, *Lamarck.*
„ „ Araucana, *Rœuschel.*
„ Quadrifaria imbricata, *Manetti.*
„ Pinus Araucana, *Molina.*

Leaves in whorls of from seven to eight in number, ovate-lanceolate, spirally placed, rigid, concave, straight, smooth, shining, deep green, very pungent, closely imbricated and cartilaginous on the margins, entirely covering the stem, and remaining on for several years, from three-quarters to one inch and three-quarters long, very sharp-pointed, somewhat thickened at the base, but without any foot-stalk, and remaining on the shoots for years quite green, but getting more separated, closely pressing along the stem, and turning backwards as the tree increases in circumference. Branches horizontal, somewhat ascending at the extremities, regularly divided laterally, in opposite pairs, quite straight, from five to seven in a whorl, and diminishing in length as they ascend higher up the tree, until at the top they terminate in the leading shoot, and form a kind of pyramidal head, lateral branches long, straight, in opposite pairs, and regularly divided; branchlets cylindrical, thickly covered all over with leaves, rather slender, undivided, and mostly bent downwards; male and female on separate trees, male catkins ovate-cylindrical, in clusters of from 6 to 7 at the ends of the branches; females solitary and erect. Cones very large, globular, solitary, and erect on the ends of the top branches; from six to eight inches broad, and from six to seven inches long, of a dark brown colour, with the scales regularly and closely imbricated, but when ripe, quite deciduous, and soon dropping to pieces. Scales, numerous, wedge-shaped, curved near the ends, and deciduous, one inch broad at the widest part, terminating in a long, flat, thin tail, one and a half inch long, and tapering to a fine point. Seeds, very large, from one to one inch and a half long, bluntly four-sided, afterwards gibbose, compressed on the opposite sides, and ending in a long, flat, inflexed, tapering tail, like those of the scales; of a deep brown colour, one inch and a quarter long, and seven-eighths of an inch at the widest part, and of a leathery texture, each cone producing from 200 to 300 seeds, two to each scale, and ripening towards the end of March.

A noble tree, growing 150 feet high, and indigenous to Southern Chili, where it is found on the western acclivities of the Andes, often reaching the snow line, but never more than 2000 feet below it. It forms vast forests in a part of the Andes inhabited by the Araucanians, a people who are said to pride themselves on their name, its signification being frank or free. It is found also in great abundance on the mountains of Caramavida and Naguelbuta in Chili, and in the neighbourhood of Concepcion. The Corcovado, a mountain that rises opposite Chiloe, is said to be studded from its foot to the snow line with large groups of these beautiful trees.

The timber is hard, heavy, durable, yellowish-white, fibrous and beautifully veined, capable of receiving a high polish, and easily worked.

The tree is full of a milky white resin, and the Araucano

Indians eat the nuts, either fresh, boiled, or roasted, and distil from them a spirituous liquor, dry and prepare a kind of flour and pastry from them, or dry them for winter store, and for trading to Concepcion and Valdivia, from whence they find their way to Valparaiso and Lima. It is the "Pehuen" or monkey-puzzle of the Chilians, no animal of that kind attempting to climb the trees.

Dr. Pœppig says, such is the extent of the Araucarian forest, on the Chilian Andes, and the amazing quantity of nutritious seeds that each full-grown tree produces, that the Indians are ever secure from want; it yielding to those nomad nations a vegetable substance, that is found in greatest plenty, the more they recede from the whites. The kernels are dried, after being boiled, for winter use; their time of ripening being towards the end of March, at which time the cones break up and fall to pieces shedding their seeds on the ground, and thus bestowing a great boon on the poor Indians, which nothing but a small parrot divides with them. And there is but little doubt when the numerous young Araucarias which are now planting, or have been planted in Europe, become large, and arrive at a fruit-bearing state, but that as great a boon will be given to future generations as that conferred on the present one by the fruit of the Spanish chestnut, which is now so largely consumed in all the towns and cities of Europe.

The Chili Pine was first introduced into England by Mr. Menzies, in 1795, and presented to Sir Joseph Banks, who planted one of the first plants at his residence, Spring Grove, near Hounslow, and sent the others to the Royal Gardens at Kew; and from which circumstance it formerly was called Sir Joseph Banks's Pine.

There are several seedling varieties of the Chili Pine, distinguished in the nurseries, but such differences are only retained while the plants are young, with the exception of the variegated kind.

ARAUCARIA IMBRICATA VARIEGATA.

A striking variety, with pale straw-coloured leaves, and occasionally the young shoots intermixed with the ordinary deep-shining green ones.

It originated in Mr. Glendinning's nursery at Turnham Green.

No. 4. ARAUCARIA RULEI, *Mueller*, Mr. Rule's Araucaria.

Syn. Eutacta Rulei, *Verlot.*
„ „ Muelleri, *Carrière.*
„ „ Rulei polymorpha, *Carrière.*

Leaves from one half to two-thirds of an inch long, lanceolate, closely imbricated, and of a deep glossy green, and although acute pointed, not pungent. Branches numerous, rigid, much divided, and symmetrical. Cones nearly globular, with the scales an inch or more broad, and furnished with projecting, narrow, lance-shaped points an inch long.

A fine bushy-headed tree, growing about 50 feet high, with the branches extending 30 feet in diameter, very rigid, tabular-formed, and six times more numerous than those on the Chili Pine (Araucaria imbricata), the whole of the branches being covered with beautiful dark glossy green leaves, closely and multifariously imbricated. It is found on one of the islets near New Caledonia, covering the summit of an extinct lofty volcano, and growing in the débris, which is as hard as adamant in summer, and deluged with rain in winter. It attains a less gigantic size than any of its congeners, and in habit bears more resemblance to the Chilian Araucaria imbricata than the Australian one called Bidwillii, from which it especially differs in its foliage, which, although acute, is not pungent or striolated.

This kind belongs to the true Araucarias, and was named by Dr. Mueller, of Melbourne, in compliment to Mr. John Rule, a nurseryman at Victoria, in Southern Australia. It will be found quite tender for the open air during an English winter.

Mr. Duncan, who first discovered this species, says that the seminal leaves of Araucaria Rulei pass through six stages before they are fully elaborated, and those stages resemble the foliage of all the others of the genus from Araucaria Cookii to imbricata. The leaves on old trees, however, are regularly and evenly produced all round the branches; and are broad, flat, and incurved or pressed against them, so as to lie imbricated over each other, and thus give to the branches considerable bulk.

Section II. EUTACTA, *Link.*, THE NEEDLE-LEAVED OR FALSE ARAUCARIAS.

Cones small, terminal, and globular. Scales broadly winged, and more or less persistent. Seeds visibly fastened at the base. Seed-leaves in four, and developed above ground. Leaves on the young plants unequal shaped and small.

Large trees, natives of Australia.

No. 5. ARAUCARIA COOKII, *R. Brown*, Captain Cook's Araucaria.
Syn. Araucaria columnaris, *Hooker.*
„ Cupressus columnaris, *Forster.*
„ Araucaria subulata, *Vieillard.*
„ „ intermedia, „
„ Eutacta Cookii, *Carrière.*
„ „ minor, „
„ „ Pancherii, „

Leaves alternate, scattered all round the sheets, those on the larger ones compressed, spreading, or curved, from half an inch to one inch long; those on the branchlets of young plants much more slender, shorter, and more numerous, incurved, and somewhat four-sided; those on the adult trees closely imbricated, rounded, and almost inlaying upon the branchlets. Branches in regular distant, horizontal whorls, slightly bending downwards, and again ascending towards the extremities; branchlets in two rows, along the sides of the branches, frequently declining, and closely covered with foliage. Male catkins, terminal, ovate, and from one and a half or two inches long. Cones ovate, rounded at the ends, from four to six inches long, and from two and a half to three and a half inches broad, lateral, and sometimes in pairs. Scales large, gibbose, coriaceous, very thin on the edges, closely imbricated, and terminating on the summit, in a long, hooked, spiny appendage.

A very tall tree, with a straight stem, covered with a thin glossy bark, resembling the Norfolk Island Pine, but differing in several respects, growing from 150 to 200 feet high, with a very narrow head, very much resembling a well-proportioned factory chimney. It is found abundantly on the islands of Aniteura, New Hebrides, and New Caledonia.

It is quite tender.

No. 6. ARAUCARIA CUNNINGHAMII, *Aiton*, Cunningham's Araucaria, or Moreton Bay Pine.

Syn. Altingia Cunninghamii, *Don.*
„ Eutacta Cunninghamii, *Link.*
„ Eutassa Cunninghamii, *Spach.*

Leaves very rigid, those on young trees vertically compressed, sharp-pointed, straight, alternate, decurrent at the base, smooth, dark green, shining, and disposed all round the branches, half an inch long, swelling towards the base, and awl-shaped; those on the full-grown trees lanceolate, acute, imbricated, curved, awl-shaped, widest at the base, and reclining on the principal branches and stem. Branches in horizontal whorls of from six to eight in number, spreading out straight, or slightly ascending when young, but bending downwards when old. Branchlets distant and alternate. Male catkins solitary, cylindrical, terminal, three inches long, and about the thickness of the middle finger. Cones ovate, three inches long, and nearly the same in thickness, terminal on the upper branchlets, and without foot-stalks. Scales wedge-shaped, numerous, thick, leathery, membraneous, winged on the margins, and wavy, half an inch broad, and terminated by a linear, awl-shaped, recurved, stiff, spiny point, one-third the length of the scale. Seeds flattened, and appearing as if concealed within the scales, which they resemble.

A large tree, growing from 100 to 130 feet high, and 14 or 15 feet in girt, with a clear stem 80 feet high, and a rather thin, loose head, found forming vast forests along the shores of Moreton Bay and on the alluvial banks of the Brisbane River, in Australia.

There are the following varieties:—

ARAUCARIA CUNNINGHAMII GLAUCA, *Aiton.*

Syn. Araucaria glauca, *Loddiges.*

This differs from the species in nothing except in the glaucous colour of its leaves and young shoots. It is a very striking variety, and was first imported by Messrs. Loddiges from Moreton Bay.

ARAUCARIA CUNNINGHAMII LONGIFOLIA, *Antoine.*

This variety has much longer and straighter leaves than the species, and is altogether a more robust tree.

No. 7. ARAUCARIA EXCELSA, *R. Brown,* the Norfolk Island Pine.

Syn. Dombeya excelsa, *Lambert.*
„ Eutassa heterophylla, *Salisbury.*
„ Eutacta excelsa, *Link.*
„ Colymbea excelsa, *Sprengel.*
„ Altingia excelsa, *Loudon.*

Leaves unequally awl-shaped, compressed, somewhat four-sided, curved, and of a light green, the adult ones imbricated, bent inwards, and pointless, from half to three-quarters of an inch long, thick, three-edged, and recurved towards the branches. Branches regularly verticillate, spread out straight, or curved upwards at the extremities; lateral ones opposite or alternate, horizontal, or drooping, very closely placed along the sides in two rows, slender and undivided. Cones globular, from five to six inches in diameter, erect on long foot-stalks, and of a brownish colour. Scales large, broadly winged, thick on the upper part, and thin on the edges, woody, and terminating in an incurved pointed projection, one-third of an inch long. Seeds large, broadly winged, thick on the upper part, and thin on the edges, having the appearance as if concealed within the scale.

A majestic, handsome tree, with a perfectly straight stem, attaining the height of from 150 to 230 feet, and from eight to eleven feet in diameter, free from branches to the height of 80 feet. It is found in Australia, but principally on Norfolk Island.

It is not hardy.

ARAUCARIA EXCELSA VARIEGATA, *Hort.*, the Variegated Norfolk Island Pine.

This variety is of much slender growth, with a portion of the branchlets of a pale yellow colour.

Gen. ARTHROTAXIS. *Don.* The Jointed Yews.

Flowers, monœcious, or male and female on the same plant, but solitary, terminal, and separate; although sometimes the different sexes are found entirely occupying distinct plants.

Cones, small, ovate or globular, and woody.

Scales, oval, entire, destitute of bracteas, and imbricated.

Seeds, from three to six under each scale.

Seed-leaves, in twos.

Leaves, without foot-stalks, scale-formed, and either closely inlaying along the branchlets, or open and incurved.

Name, derived from "Arthron," a joint, and "Taxis," arrangement, the shoots having the appearance of being jointed.

All small trees, natives of Van Diemen's Land.

No. 1. ARTHROTAXIS CUPRESSOIDES, *Don*, the Cypress-like Jointed Yew.

Syn. Arthrotaxis imbricata, *Maule.*
„ Cunninghamia cupressoides, *Zuccarini.*

Leaves very small, closely inlaid along the branchlets, imbricated, ovate, blunt-pointed, thick in texture, smooth, and bright glossy green, from one to three lines long, obscurely keeled on the back, and concave on the face, entirely adhering at the base and scariose. Male catkins without foot-stalks, solitary, or in loose heads at the ends of the branchlets, with numerous close, scale-formed leaves at their base. Cones small, roundish, and numerous. Scales wedge or lance-shaped, woody, much thickened at the part which covers the seeds, almost shield-shaped, trigone, and uneven on the surface. Foot-stalks compressed and four-sided.

A small erect tree, from 20 to 30 feet high, much branched and with numerous branchlets, which are slender, spreading or pendulous, and cylindrical.

It is found at Lake St. Claire and along Pine River, in Tasmania, and is tolerably hardy.

No. 2. ARTHROTAXIS GUNNIANA, *Hooker*, Gunn's Jointed Yew.

Leaves spirally arranged, spreading, slightly curved upwards, very rigid, linear-lanceolate, widest at the base, regularly tapering to a sharp spiny point, distantly disposed along the branchlets, and without any foot-stalks, convex, and bright glossy green on the back, flat, or slightly concave, and frequently entirely covered on the upper surface with a glaucous white powder, and from a quarter to half an inch long, and nearly a line wide at the base. A large bush, with numerous rather long branches and branchlets, which are but little divided, but sometimes drooping at the ends.

It is a native of Tasmania, and is tolerably hardy.

No. 3. ARTHROTAXIS LAXIFOLIA, *Hooker*, the Open-leaved Jointed Yew.

Syn. Arthrotaxis Donniana, *Parker*.
" " Doniana, *Maule*.

Leaves spirally disposed, loosely imbricated, somewhat incurved, ovate or oblong-lanceolate, keeled or convex on the back, concave on the face, adhering at the base, free and spreading at the points, and acute; branchlets, long, terete, slender, erect, forked, and of a bright green colour. Cones globular, or somewhat egg-shaped, and nearly three-quarters of an inch long; scales spirally inserted at the base, imbricated, leathery, ovate-acute, narrow, and stipitate at the base, seeds mostly in fours under each scale, somewhat linear and compressed.

This kind forms a small branching tree from twenty-five to thirty feet high, found near the cataracts on the Meander in Van Diemen's Land. It is tolerably hardy.

No. 4. ARTHROTAXIS SELAGINOIDES, *Don*, the Selago-like Jointed Yew.

Syn. Arthrotaxis Alpina, *Van Houtte*,
" Cunninghamia selaginoides, *Zuccarini*.

Leaves ranged in five spiral rows, closely placed along the shoots, slightly imbricated, ovate or ovate-lanceolate, incurved, leathery, rigid, blunt-pointed, keeled on the back, and seldom more than four or five lines long, but frequently very much shorter; level on the inside, convex or obsoletely keeled on the back, and very smooth; at first light green, but afterwards of a much deeper colour, and quite glossy; rigid, dilated, and firmly adhering at the base. Male and female flowers sometimes on the same plant, sessile, solitary, and placed at the ends of the branchlets. Cones globular, the size of a walnut, with thick woody, non-peltate scales, on thick foot-stalks, almost tetragone, and thickest at the part covering the seeds, oval on the top, acute, and laying close together.

Seeds in threes, but more frequently in twos (one being abortive), under each scale, with hardly any wings, the wing being constituted in a great part by the epidermis of the seed; shell thin and crusty.

A bush from 10 to 20 feet high, with spreading ever-green branches and branchlets, tridently divided, or sometimes only forked at irregular distances; the adult stems are covered with a corky bark, and the branches with leaves united along the whole surface, and persistent, lateral ones short and completely covered with leaves drawn close together, and appearing as if jointed. It is found growing at the cataracts on the Meander, in Tasmania (Van Diemen's Land).

It is tolerably hardy.

Gen. BIOTA. *Don.* The Chinese Arbor-Vitæ.

Flowers, monœcious, or male and female on the same plant, but separate; male catkins oval or conical, female ones solitary and globular.

Cones, roundish, squarrose, and composed of from six to eight leathery valves or scales.

Scales, in opposite cross pairs, peltate, and furnished with a spiny point just below the apex, and containing each two seeds at the base.

Seeds, in twos under each scale, bellying, crustaceous, and wingless, or only furnished with rudimentary ones.

Seed-leaves in twos.

Leaves, scale-formed, very small, in opposite cross pairs, adpressed and tiled, or imbricated in four rows.

Name, derived from "bi," two, and "otis," an ear; the common English one, Arbor-Vitæ (tree of life), is deduced from its China and Japan appellations. In Japan it is called "Hiba" (tree of life), and in China, "Hak" (everlasting life), on account of the plants being evergreen and of a beautiful bright green at all seasons of the year.

All the plants belonging to this genus were formerly included in that of Thuja, and are large bushes or small trees, found in China, Tartary, Japan, and the North of India.

SECTION I.

No. 1. BIOTA ORIENTALIS, *Don*, the Chinese Arbor-Vitæ.

Syn. Thuja Orientalis, *Linnæus*.
„ „ acuta, *Mœnch*.
„ Cupressus Thuja, *Targ-Tozz*.
„ Platycladus strictus, *Spach*.

Leaves on the adult plant very small, in four rows, ovate, rhomboid, acute-pointed, scale-like, imbricated, adpressed, decurrent, and furrowed along the base, the outer or marginal ones lapping over on both sides, the upper and lower ones flat, with the points thickened, glaucous, green, and shining when young; afterwards dull green when old, and glandless. Branches somewhat vertical and horizontal at first, but soon afterwards turn up at the ends, and finally become fastigiate, with the stem; branchlets disposed in two rows, densely crowded along the extremities of the branches, and placed sideways. Cones, ovate-elliptic, six-valved, solitary at the ends of the small branchlets, half an inch long, green when young, but light brown when ripe, and composed of six scales, two being central and four around the sides. Scales blunt, central ones truncate, with a short stout projecting point below the apex, each scale covering two naked, egg-shaped, somewhat angular, wingless seeds.

A low evergreen tree, or pyramidal bush, densely clothed with deep green branchlets, found abundantly in China and Japan, growing in rocky situations and on the mountains, where it attains a height of 18 or 20 feet. It has the following varieties :—

BIOTA ORIENTALIS AUREA, *Hort.*, the dwarf golden Arbor-Vitæ.
Syn. Biota pyramidalis pumila, *Carrière*.

Syn. Thuja aurea, *Waterer.*
„ „ Orientalis aurea nana, *Hort.*
„ „ compacta aurea, *Hort.*
„ „ nana aurea, *Hort.*

This variety forms a very neat, dwarf, round, dense, and compact bush, seldom exceeding three or four feet in height, with short, slender branchlets, which during the winter and spring become of a golden yellow colour, particularly the points of the shoots.

It was raised in the nursery of Messrs. Waterer and Godfrey, at Knaphill.

Biota Orientalis variegata, *Endlicher*, the variegated Chinese Arbor-Vitæ.

Syn. Biota Orientalis variegata aurea, *Carriere.*
„ Thuja variegata, *Hort.*
„ „ Orientalis variegata, *Hort.*

This is the golden variegated Chinese Arbor-Vitæ, and a very effective variety, from the branchlets being of a bright golden colour and bright green, equally intermixed all over the plant.

The Japanese call this kind "Furi-hiba" (two-coloured tree of life), and "Suri-hiba" (variegated tree of life), on account of its having the yellow and green branchlets intermixed all over the plant.

Biota Orientalis argentea, *Hort.*, the silvery-white variegated Arbor-Vitæ.

Syn. Thuja argentea, *Hort.*

This is the silvery-variegated Chinese Arbor-Vitæ, and only differs from the preceding variety in the white colour of a portion of its branchlets.

Biota Orientalis arthrotaxoides, *Hort.*, the Arthrotaxis-like Arbor-Vitæ.

This singular and distinct variety forms a dense dwarf bush, with the branchlets curiously contorted.

BIOTA ORIENTALIS FUNICULATA, *Hort.*, the cord-branched Arbor-Vitæ.

Syn. Thuja funiculata, *Hort.*
„ Biota funiculata, *Hort.*

This singular kind has slender, little divided, bright green branchlets, thinly furnished with small, open, and acute-pointed leaves. It is said to be a hybrid, raised in France, between Biota pendula and Orientalis.

BIOTA ORIENTALIS MONSTROSA, *Carrière*, the monstrous Chinese Arbor-Vitæ.

Syn. Thuja monstrosa, *Hort.*
„ „ Sibirica monstrosa, *Knight.*

This variety is remarkable on account of its short gross branchlets, which are few in number, much contorted, and frequently four-sided, from the thickened obtuse-ovate (rarely acute) leaves.

BIOTA ORIENTALIS GRACILIS, *Carrière*, the Nepal Arbor-Vitæ.

Syn. Biota Nepalensis, *Endlicher.*
„ „ freneloides, *Belgian Gardens.*
„ „ gracilifolia, *Knight.*
„ Thuja freneloides, *Hort.*
„ „ Nepalensis, *Hort.*

This variety differs from the species in being much slenderer, more compact and erect in all its parts, and in having much smaller and more acute foliage. It is found on the mountains of Upper Nepal and other parts of Northern India, and is called by the natives "Majoo," which, according to Major Madden, is derived from the external resemblance of its fruit to the nutgall.

BIOTA ORIENTALIS GLAUCA, *Pince.*

Syn. Thuja glauca, *Hort.*

This beautiful and very distinct variety differs from the species in having all its leaves and branchlets covered with a fine glaucous powder, giving the plant quite a silvery appearance when in good health. It was raised by Messrs. Lucombe and Pince, of Exeter.

Biota Orientalis Sieboldii, *Endlicher.*

Syn. Biota Japonica, *Siebold.*
„ „ Orientalis nana, *Carrière.*
„ „ „ compacta, *Hort.*
„ „ „ incurvata, *Knight.*
„ „ Coræana, *Siebold.*
„ Thuja compacta, *Hort.*
„ „ nana, *Hort.*
„ „ Orientalis compacta, *Hort.*
„ „ Japonica, *Hort.*
„ „ stricta, *Hort.*

This kind is distinguished by its dwarf, compact, conical head, and numerous short branchlets, which are of a bright green colour.

The Japanese name for this variety is "Kus-jak" (peacock's tail), on account of its close, fan-like branchlets and compact general outline, resembling the tail of a peacock. It is much cultivated in pots by the Japanese, on account of its dwarf, compact habit.

Biota Orientalis elegantissima, *Rollisson*, the very elegant Chinese Arbor-Vitæ.

Syn. Thuja elegantissima, *Hort.*

A very elegant dwarf variety, obtained some years ago in the nursery of Messrs. Rollisson, of Tooting, from a sport of the common Chinese Arbor-Vitæ. It has a much neater appearance and more erect habit than the Biota Orientalis aurea, with all the tips or points of the young shoots of a golden yellow colour during the summer and autumnal months. It is the best of all the golden-tinted varieties.

BIOTA ORIENTALIS FALCATA, *Lindley*, the falcate scaled Arbor-Vitæ.

Syn. Thuja falcata, *Hort.*
„ Biota Fortunei, *Hort.*

This kind is very upright and pyramidal in its growth, in consequence of which it is largely employed by the Japanese in forming hedges, for which its close, compact habit renders it most suitable.

Mr. Fortune found it at Youkahama, in Japan, forming a dense, conical bush, from 12 to 15 feet high, with great green cones, having the spine at the end of the scales, long, and curved backwards, like a small sickle.

BIOTA ORIENTALIS PEKINENSIS, *Gordon*, the Peking Arbor-Vitæ.

Leaves on the adult plants very small, scale-formed, closely imbricated in four rows, ovate-pointed, and furrowed on the back; the marginal ones lap over on both sides, the upper and under ones are flat, thickened at the points, glaucous green, and shining when young, but dull green when old. Branches rather long and somewhat spreading. Branchlets slender, flat, linear, and not very thickly disposed in two lateral rows. Cones small, globular, solitary at the ends of the small branchlets, half an inch long, and the same in breadth, and of a fine glaucous violet colour when young. Scales mostly eight in number, with the outer ones large, flat, broadly ovate, and thickened near the ends, and the inner or central ones narrow, very much smaller, only a little longer, and truncate, with a short stout spine near the top. Seeds oval, wingless, and in twos at the base of the scales.

A splendid tree, from 50 to 60 feet high, with a stem two feet in diameter, found by Mr. Fortune on the Western Hills, near Peking, in 1861.

BIOTA ORIENTALIS PYRAMIDALIS, *Endlicher*, the tall Chinese Arbor-Vitæ.

Syn. Biota Orientalis excelsa, *Hort.*
„ „ excelsa, *Hort.*
„ „ pyramidalis, *Carrière.*
„ „ Orientalis stricta, *Loudon.*
„ Thuja Orientalis cupressoides, *Cels.*

This fine variety has a very tall, narrow, fastigiate head, very much resembling the upright Cypress in shape, and quite as compact, with the foliage and branches more robust than those of the common form of the Chinese Arbor-Vitæ, and growing from 20 to 30 feet high. This variety must not be confounded with the Tartarian Arbor-Vitæ (Thuja tartarica).

BIOTA ORIENTALIS TRIANGULARIS, *Hort.*, the triangular-branchletted Arbor-Vitæ.

A curious, dwarf, compact variety, with the branchlets arranged in a triangular manner, and not flat or fan-shaped, as is usually the case.

No. 2. BIOTA PENDULA, *Endlicher*, the weeping Arbor-Vitæ.

Syn. Cupressus pendula, *Thunberg.*
„ „ patula, *Persoon.*
„ „ filiformis, *Hort.*
„ „ pendulata, *Hort.*
„ Thuja pendula, *Lambert.*
„ „ filiformis, *Loddiges.*
„ „ pendulata, *Hort.*
„ „ Orientalis flagelliformis, *Jacques.*
„ Biota Orientalis pendula, *Parlatore.*

Leaves in opposite pairs, very small, somewhat distant, scale-formed or ovate-lanceolate, spreading at the points, and loosely imbricated, decurrent and keeled on the back, much smaller, shorter, less pointed, and more closely imbricated at the base and towards the ends of the branchlets than along the intermediate parts, where they are more distant, pointed, longer, and spreading out at the points. Branches spreading, slender, very long, and recurved; branchlets long, numerous, collected in clusters at irregular distances along the branches, slender, thread-like, sometimes forked, loosely drooping, and distantly covered with small scale-like sharp-pointed leaves. Cones globose or ovate-oblong; half an inch long, erect, and produced in clusters of from three to five in number, near the ends of the branches, and composed of from four to six scales. Scales externally convex, smooth, and terminating near the apex in a stout recurved blunt point. Seeds ovate, slightly angular, and wingless.

A bush or small tree, with a straight stem and very long slender drooping branches, and branchlets growing 10 or 15 feet high and perfectly hardy, but subject to vary in the appearance and size of its branchlets according to soil and situation. It is found growing spontaneous on the Hakone Mountains in Japan, but is cultivated universally all over Japan and the northern parts of China, on account of its graceful appearance. It is also said to be found in Tartary and Nepal, but on very doubtful authority. It was also stated, some years ago, to be a hybrid raised by the Loddiges, between a Red Cedar and a Chinese Arbor-Vitæ, in their nursery at Hackney; and, singular as it may appear, the same was said by some person in France, only that in this case the hybrid was raised between the common Cypress and Chinese Arbor-Vitæ. Dr. Siebold, however, having discovered the plant in a wild state in Japan, soon dispelled such statements.

The Japanese names for this kind are "Ito-suga" (the cord-branched evergreen), and "Fi-moro Hiba" (the slender or drooping tree of life). The Chinese call it "Hi-no-ki" (the cord-branched or slender-formed shrub), and "Sisan" (common).

SECTION II.—DOUBTFUL KINDS.

No. 3. BIOTA MELDENSIS, *Lawson*, the French hybrid Arbor-Vitæ.

Syn. Thuja hybrida, *Hort.*
„ „ Meldensis, *French Gardens.*

Leaves needle-shaped, decurrent, sharp-pointed, and in opposite distant pairs, somewhat spirally placed along the branches, glaucous on both sides when young, but of a light shining green when old, quite stiff, and extended outwards. Stem and branches ascending, lateral ones loose, spreading, and irregularly placed along the main branches. Branchlets very slender, rather drooping, and distantly clothed with sharp-pointed leaves. Cones said to be like those of the common Arbor-Vitæ.

This plant is said to be a hybrid between the Chinese Arbor-Vitæ and the common Red Cedar, and to have been raised at Meaux in France. It, however, has very much the appearance, when young, of an attenuated variety of the Virginian or Red Cedar, and is a very doubtful hybrid, having not the least appearance of the Arbor-Vitæ in it.

It is quite hardy.

Gen. CALLITRIS. *Ventenat.*

Flowers, monœcious, or male and female on the same plant but separate and terminal, the male catkins globular, female ones solitary.

Cones, globular or somewhat four-sided, and composed of four-valved woody scales, the alternate pair much the smallest.

Valves or Scales, in opposite pairs, regularly truncated on the top, and four in number.

Seeds, one or two at the base of each scale or valve, the larger pair of scales having two seeds each, the smaller pair but one under each. Seeds winged on each side, slightly compressed, and somewhat three-edged.

Seed-leaves, from three to six, but mostly in fours.

Leaves, very small, scale-formed, in alternate opposite pairs, close together at the base of the joints.

Name derived from "Kallos," beauty, from the elegant and regular appearance of the jointed branchlets.

CALLITRIS QUADRIVALVIS, *Ventenat*, the jointed Arbor-Vitæ.
Syn. Thuja articulata, *Wahlenberg*.
„ Frenella Fontanesii, *Mirbel*.

Leaves very small, scale-formed, in alternate opposite pairs, close together at the base of the distant joints, and facing four successive ways, those on the margins clasping both sides, those on the upper and lower sides flat, with a terminal point and small transparent gland near their extremity; those on the adult branches are very much smaller and decurrent. Branches spread out horizontal, with numerous lateral ones, regularly dividing again into flattened, slender jointed, shining, smooth, pale green branchlets. Branchlets numerous, regularly branching, quite flat, glabrous, sometimes glaucescent, distinctly jointed and straight. Cones globular, or somewhat quadrangular, and consisting of four scales or valves, in opposite pairs, regularly truncate on the summit, slightly concave and obtuse; the two opposite ones much longer and seldom convex, but terminating in a point at the extremity, and containing one or two double-winged seeds under each.

A large tree, diminishing into a small bush, according to elevation and soil; found on the mountains of Barbary in rocky situations, and on Mount Atlas, in Northern Africa.

Its Barbary name is "Alerce."

It is not hardy, except in the milder parts of England.

Gen. CEDRUS. *Link.* The Cedars.

Flowers, monœcious, or male and female on the same plant, but separate ; the male catkins solitary, cylindrical, erect, and terminal, female ones somewhat oval and obtuse, solitary, very rarely in twins, and erect.

Cones, oval, obtuse at the ends, quite smooth, erect, and on the upper side of the branches.

Scales, very closely placed, rounded on the outer margins, quite thin at the edges, leathery, smooth, and more or less deciduous.

Seeds, in twos under each scale, with a soft tegumental covering, full of turpentine, more or less angular, and furnished with a large persistent membranaceous wing.

Seed-leaves, mostly nine in number.

Leaves, needle-shaped, somewhat four-sided, stiff, persistent, and disposed either in bundles or solitary.

All splendid evergreen trees, found either on Mount Lebanon, the North of India, or on the Barbary and Atlas Mountains in Northern Africa.

The word *Cedar* (Kedros of the Greeks) was not restricted by the ancients to the Cedar of Lebanon, but probably derived from the Arabic "Kedr," worth or value, or its derivative "Kedrat," strength or power, in allusion to the value of the wood. The Hebrew and Arabic names for the Cedar are "Araz" or "Arz," and that of the Romans "Arar," all from the Arabic root "Araza ;" "He was firm and stable, with roots deeply fixed in the ground" (*Golius*). Other writers derive the name from "Kaio," to burn, and "Drio," to sweat or distil, a kind of incense being obtained from the split wood, and burnt as a substitute for it in the East ; Pliny also describes the process of making "Cedria," from the cedar-wood, by distillation, and affirms its great value as a remedy for tooth-ache, for which cure our modern creosote is therefore but an old remedy revived. Again, others derive the name from *Cedron,* a brook in Judæa, the Cedar of Lebanon being formerly found plentiful along its banks.

No. 1. CEDRUS ATLANTICA, *Manetti*, the Mount Atlas Cedar.

Syn. Cedrus Africana, *Gordon.*
„ „ argentea, *Loudon.*
„ „ elegans, *Knight.*
„ Abies Atlantica, *Lindley.*
„ Pinus Atlantica, *Endlicher.*
„ „ Cedrus Atlantica, *Parlatore.*

Leaves in tufts, or singly on the young shoots, stiff, needle-shaped, cylindrical, or flattened on the upper side, sharp-pointed, and straight; evergreen, with a silvery appearance, and shorter and denser than those of the common Cedar of Lebanon, very irregular in length in the fasciles, varying from half to three-fourths of an inch in length, longer on the leading shoots, and with a furrow running along the whole length of the leaf. Branches rather slender, less rigid, and covered with scattered bundles of leaves, mostly opposite, but sometimes very irregularly placed. Cones ovate, flattened, or rather depressed at the ends, from two and a half to three inches long, erect on the upper side of the external branches, of a shining light brown colour, and full of resinous matter. Scales closely pressing against each other, smooth, broad, truncate and blunt on the upper part, of a leathery texture, and thin on the edges. Seeds of an irregular or angular shape, soft, and with a thin transparent wing one inch or more long.

A noble tree, like the Cedar of Lebanon, growing from 80 to 100 feet high, with horizontal branches and a tabular-shaped head when old, but somewhat pyramidal and open in the head when young.

It is found on the highest mountains in Algeria, and particularly on the famous Atlas range in Northern Africa, at an elevation of from 7000 to 8000 feet.

The Mount Atlas Cedar is quite hardy, and more rapid in growth than the common Cedar of Lebanon.

No. 2. CEDRUS DEODARA, *Loudon,* the Deodar or Indian Cedar.

Syn. Abies Deodora, *Lindley.*
„ Cedrus Indica, *De Chambr.*
„ Pinus Deodara, *Roxburgh.*

Leaves evergreen, somewhat four-sided, needle-shaped, acute pointed, very glaucous, and from one to two inches long, those on the principal and lateral branches being collected in tufts or close bundles of from 30 to 60 in number, on very short and numerous branchlets, while those on the young shoots are solitary, alternate and scattered along the twigs, and when young very glaucous; but getting much greener as they become older. Branches very stout, irregularly placed along the stem, much divided, horizontal, and quite flat, the lower ones being more or less deflected and close to the ground, but the general aspect of the tree when young is drooping and exceedingly graceful, but as it grows older and larger the branches assume a stiff, flat, and solemn appearance, like that of the Cedar of Lebanon. It flowers in September, and the seeds are ripe in October or November of the following year, or in about thirteen months. The male catkins, though solitary, are very numerous, erect, two or three inches long, at first oval, but gradually become cylindrical; the majority of these and the female flowers are produced on separate trees, but a considerable number of trees also produce both male and female flowers on the same individual. In about a month after the Deodar has flowered, the young cones, covered with a bluish bloom, appear of a cylindrical form, without any foot-stalks, and solitary on the top of the little tufts of leaves. Cones erect, solitary on the upper side of the stout top branches, ovate, obtuse, or nearly cylindrical, from three to five inches long, and two and a half inches wide, flat, and slightly depressed at both ends, and very much resembling those of the common Cedar of Lebanon, of a rusty brown colour, and when the seeds are ripe, break up and fall to pieces, shedding both scales and seeds on the ground. Scales firmly and closely imbricated when young, but deciduous when matured; broad, thin, smooth, quite entire on the margins, of a rusty-brown colour, and full of resinous matter on the outside, in the shape of numerous transparent tears. Seeds wedge-shaped, soft, and full of turpentine; wings, obovate and membranaceous.

In the Himalayas the Deodar occupies a great vertical belt or range, flourishing from about 5500 to 12,000 feet of elevation, mixed up for the first 1500 feet with Pinus longifolia, while for the last 3000 or 4000 feet of elevation it accompanies Abies Smithiana and Picca Pindrow. It is found on all the higher mountains from Nepal up to Cashmere; and Dr. Griffith describes it as occurring in vast forests and of great size towards Kaffristan, where it is called "Nokhtur," and flourishes at an elevation of from 6000 to 10,000 feet above the sea. But to see the Deodar in its greatest perfection, one must visit the snowy ranges and lofty mountains of the interior, far from the influence of the plains, and where, for nearly half the year, it is enveloped in snow; there, its dimensions become gigantic. In Lower Kamaon there is an extensive forest of very fine trees from 20 to 27 feet in girth; and Major Madden measured one tree in 1830 which measured 36½ feet in circumference fully five feet from the ground; and on a subsequent journey he saw several on the northern declivity of the Booram and Roopin Passes not under 30 feet in girth, and from 150 to 200 feet high. The timber has a peculiar and strong odour, so that no insects will touch it; the grain is open, straight, not liable to warp, even if in thin boards, and exposed to the weather, and may be considered the best wood of its class in the world; but like all other woods of that class, if cut young it will soon decay when in contact with damp; but after its timber the most valuable product is its turpentine, which when rubbed on any other kind of timber, renders it less liable to decay and the ravages of vermin.

The Deodar Cedar is called "Kelon," "Kolan," and "Kolain," in Gurhwal, all Sanscrit variations for Cedar, and its resinous products. In Kunawur it is known as the "Kelmung" by the Arian population, and about Simla as that of "Keloo," "Kelou," and "Keoulee," all vernacular terms for resin or its extracts. The Hindostanee names "Devadaru," "Deodara," and "Dewar," are all derived from "Deva" or "Derva" (deity), and "daru" (timber or tree), and rendered by Sanscrit writers as "Tree of God," "Spirit-Bearer," "Divine-tree," and "Lord of Cedars." In Kafiriston the tree is called "Nokhtur," on account of its prickly or pungent leaves; and the people of Nepal, Cashmere, and Persia apply the same names and terms as those used by the hill people in India, and hold it in equal veneration. It has not yet been found in a natural state either in Eastern Nepal or Sikhim, although these gigantic sons of snow fringe the bare rocks and fix their roots where there appears to be very little soil, on the lofty passes from Nepal to Cashmere; and, according to Captain Pemberton (in his "Report on the Eastern Frontier"), the most southern point to which the Deodar has yet been traced is the summit of the lofty ranges immediately west of Munepoor, an interesting region, which, with the Singfo Mountains, south-east of Assam, carry the zone of perpetual snow farthest south in India. The Deodar also grows to extraordinary dimensions on all the higher mountains throughout the western Himalayas, and occurs in vast forests in Kunawur, Kamaon, Kooloo, Mussoorie, and on the Chumbra range in Kangara, at elevations varying from 6000 to 12,000 feet. At Rashulah, in Kooloo, a forest exists with trees from 18 to 24 feet in girth, at four feet from the ground; and according to Dr. Jameson, of two trees measured by him near Mulari, in Gurhwal, at an elevation of 11,000 feet, one girthed 26 feet at three feet from the ground, and the other 27 feet; but, as a general rule, the finest trees always are found growing on the north side of barren mountains, in thin, poor soil, formed from the decomposition of granite, gneiss, mica, or clay-slate. Captain Johnson, in his "Excursion to the Sources of the Jumna," states that the peaks on the northern side of the Boorung Pass were completely hidden by forests of gigantic Deodars, some of which measured 33 feet in circumference, and were from 60 to 70 feet without a branch. Here, too, the character of the timber was different from that grown in southern aspects and rich soil, it being more compact, harder, and of a deeper red, owing to its slow growth. The boat-builders along the Jhelum River distinguish its timber under the appellation of "Peliptur," and consider it the most valuable of all for its durability, both for naval and architectural purposes, the wood being compact, rather close-grained, long-fibred, highly resinous, deliciously perfumed, and lasting for a great number of years, even though much exposed to the elements, being but little affected by water, as boats built of its timber will last for twenty or thirty years, while those built of the "Cheer" (Pinus longifolia) only last six or seven.

It was first introduced into England in the year 1822, by the Honourable W. Leslie Melville, and produced its cones for the first time in Europe in 1858, at Bicton, the residence of the Baroness Rolle, in Devonshire.

CEDRUS DEODARA VIRIDIS, *Hort.*, the green-leaved Deodar.

Syn. Cedrus Deodara tenuifolia, *Knight.*

A very distinct variety, on account of its bright grass-green colour and slender habit. It is entirely free from any glaucous appearance, even when young.

CEDRUS DEODARA ROBUSTA, *Hort.*, the robust Deodar.

Syn. Cedrus Deodara gigantea, *Knight.*

A robust-growing variety, with a very glaucous appearance, and much larger in all its parts.

CEDRUS DEODARA CRASSIFOLIA, *Hort.*

This variety differs from the preceding one in having much thicker and shorter leaves, and much shorter and more compact branches, which are less pendulous.

CEDRUS DEODARA ERECTA, *Cripps*, the Erect-growing Deodar Cedar.

Syn. Cedrus Deodara verticillata glauca, *Cripps.*

This is a fine, erect growing variety, with the leaves of a much more silvery hue than that of the common Deodar.

It is in the nursery of Mr. Cripps, at Tunbridge Wells, and the handsomest of all the silver tinted varieties.

No. 3. CEDRUS LIBANI, *Barrelier*, the Cedar of Lebanon.

Syn. Pinus Cedrus, *Linnæus.*
„ Abies Cedrus, *Poiret.*
„ Larix Cedrus, *Miller.*
„ „ patula, *Salisbury.*
„ „ Orientalis, *Tournefort.*
„ Cedrus Phœnicea, *Renealm.*

Leaves simple, very dense, in alternate tufts of about 30 in number, evergreen, rigid, partially four-sided, or cylindrical, tapering to the point, straight, one inch long, sharp-pointed, and of a dark grass-green colour. Branches horizontal, with the branchlets disposed in a flat, fan-like manner on the branches, very numerous, and thickly set with leaves. Cones erect, ovate, flattened at the ends, and depressed, four or five inches long, and two inches and a half wide, with rather a long foot-stalk, of a grayish-brown colour, and remaining firmly attached for years to the branches. The cones require two years to ripen, and exude a large quantity of resinous matter while growing. Scales flat, and firmly pressed against each other, one inch and a half broad, obtuse, and truncated at the summit, very thin, leathery, slightly denticulated at the edges, of a reddish colour, and shining on the flat part. Seeds somewhat triangular, soft, and surmounted by a broad and very thin membranaceous wing more than an inch long.

A noble tree, with wide-spreading horizontal branches, growing from 60 to 80 feet high, and 30 feet in circumference, with a flat, tabular top when old.

It is found on Mount Lebanon, and probably over the whole of that group of mountains which is situate between Damascus and Tripoli, in Syria, and which includes the Libanus and Mounts Amanus and Taurus, of antiquity.

There are the following varieties :—

CEDRUS LIBANI ARGENTEA, *Loudon.*

Syn. Cedrus Libani glauca, *Hort.*

This beautiful variety has the leaves of a silvery or glaucous hue on both sides, and contrast well with the more common form with green foliage.

CEDRUS LIBANI NANA, *Loudon.*

A very dwarf variety, seldom growing more than two or three feet high, with very short shoots and smaller leaves than the species.

CEDRUS LIBANI PENDULA, *Knight.*

This variety has slenderer and somewhat pendulous branches.

Gen. CEPHALOTAXUS. *Siebold.* The Cluster-flowered Yews.

Flowers, diœcious, or male and female on different plants, pedunculate, and in globular heads.

Fruit, drupaceous, or like the common plum, fleshy outside, and two or three in a head.

Seeds, solitary, nut-like, with a bony or woody shell, and enclosed in the fleshy disk.

Leaves, one-nerved, linear, alternate, and in two rows.

Seed-leaves, in twos.

Name, derived from "Kephale," a head, and "taxis," arrangement, flowers and fruit growing in close globular heads.

All evergreen trees, found in China and Japan.

No. 1. CEPHALOTAXUS DRUPACEA, *Siebold*, the Drupaceous or Plum-fruited Cephalotaxus.

Syn. Cephalotaxus Fortunei fœmina, *Carrière.*
„ „ coriacea, *Knight.*
„ Podocarpus drupacea, *Hort.*
„ Taxus baccata, *Thunberg.*
„ „ coriacea, *Hort.*
„ „ Japonica, *Hooker,* not *Loddiges.*

Leaves strictly arranged in two rows laterally along the branches, regularly opposite, rather close, leathery, stiff, linear, slightly curved or falcate, bluntly tapering to a short, acute, spiny point at the apex, and on very short foot-stalks, more or less twisted at the base, from three-quarters to one inch and a quarter long, and one and a half to two lines broad near the base, of a deep glossy green colour above, with a narrow, elevated nerve along the middle, and with two broad glaucous white bands along the under side, but with the mid rib and margins of a bright glossy green below. Branches in horizontal whorls along the stem, upper ones sometimes a little ascending, quite straight, very spreading, flat, stiff, and rather short, lateral ones in two rows, quite flat, short, rather numerous, and either opposite or alternately placed at irregular distances along the principal branches. Branchlets very short, rather stiff, very flat, and spread out laterally on each side. Buds small, and covered with persistent, imbricated, acute-pointed, more or less extended scales. Male flowers in globular heads provided with bracts, each catkin being oval and rather pointed. Fruit drupaceous, or plum-like, regularly elliptic, and from three-quarters to one inch long, and three-quarters of an inch broad. Seeds solitary, with a thin, hard, bony shell, covered with a thin fleshy substance, and purplish skin when ripe. Seed-leaves in twos, and rather short.

A fine, compact, evergreen tree, growing from 35 to 40 feet high, found in China and Japan, both cultivated and in the wild state, particularly on the mountains of Nagasaki, at an elevation of 2000 feet, and in the north of China, in the province of Yang-Sin. The Japanese name is " Kaja."

It is quite hardy.

No. 2. CEPHALOTAXUS FORTUNEI, *Hooker*, Fortune's Cephalotaxus.

Syn. Cephalotaxus filiformis, *Knight.*
" " Fortunei pendula, *Carrière.*
" " " mas, *Hort.*

Leaves on the lateral branches and branchlets strictly arranged in two rows; they are long, linear-lanceolate, regularly tapering to an acute point, quite straight, smooth, flat, mostly opposite, but sometimes slightly alternate, somewhat distant apart, and nearly sessile, or on very short, more or less twisted foot-stalks; those on the principal branches and on the young plants are mostly scattered alternately and much the longest, of a deep glossy green, with a narrow, acute rib along the middle on the upper surface, and of a glaucous white below, except the mid-rib and margins, which are of a bright glossy green colour. Branches in horizontal whorls round the stem, long, slender, spreading, and rather pendent towards the ends; lateral ones and branchlets arranged laterally in two rows, frequently in opposite pairs, but sometimes irregularly and distantly scattered, very slender, long, and more or less filiform. Buds very small, and covered with persistent, long, acute, glossy, imbricated scales, extended at the points, and which remain at the base of each successive growth for some years afterwards in a withered state. Male flowers in globular heads, axiliary, and on short foot-stalks. Fruit drupaceous, regularly elliptic, tapering to both ends, and frequently furnished with a small point on the apex, from one inch to one and a quarter long, and nearly three-quarters of an inch broad. Seeds solitary in each fruit, and covered with a hard, bony shell, rather thin and brittle, and enveloped in a thin fleshy substance, and purplish skin when ripe.

A fine evergreen tree, growing from 40 to 60 feet high, with long, slender, drooping branches; but in this country it does not readily make a leader, and is inclined to be bushy. Mr. Fortune found it in the north of China, particularly in the province of Yang-Sin.

It is quite hardy.

No. 3. CEPHALOTAXUS PEDUNCULATA, *Siebold*, the Long-stalked Cephalotaxus.

Syn. Taxus Harringtonia, *Loudon.*
„ „ Inukaja, *Knight.*
„ „ Sinensis, *Knight.*

Leaves in two rows, mostly opposite and flat on the branchlets, but somewhat spiral and alternate on the leading shoots and principal branches, linear, a little curved, very closely set on the shoots, thick, leathery, revolute, and without or on very short foot-stalks, from one and a half to two inches and a half long, and one and a half to two lines broad, of a bright glossy green above, and furnished with an elevated straight nerve, and two broad glaucous white bands on the under one, terminating in an acute or obtuse spiny point. Branches numerous, spreading, and mostly in whorls. Branchlets in two rows, horizontal, and mostly opposite. Buds furnished with persistent imbricated scales. Male flowers collected in globular heads, on peduncules furnished with bracts, each catkin being oval and much shorter than the bracteas, female ones axiliary and disposed in heads on long, somewhat four-cornered fruit-stalks. Fruit, two or three in a close head, drupaceous, or each enclosed in a fleshy covering, like the fruit of the common plum. Seeds solitary in each fruit, erect, and with a smooth bony shell, which is hard and thin. Seed-leaves in twos, short, and rounded at the points.

A handsome, small evergreen tree, growing from 20 to 25 feet high, with numerous spreading branches, mostly in whorls round the stem; found abundantly in Japan; cultivated in gardens under the name of "Inukaja" (not wild).

It is quite hardy.

No. 4. CEPHALOTAXUS UMBRACULIFERA, *Siebold*, the Shade-affording Cephalotaxus.

Syn. Torreya grandis, *Fortune.*
„ Cephalotaxus grandis, *Hort.*
„ Caryotaxus grandis, *Hort.*

Leaves in two rows, quite flat, closely placed along the shoots, very rigid, linear-lanceolate, rather short, and somewhat falcate, from three-quarters to an inch long, and one line and a half broad near the base, of a light glossy green above, but much paler below, with two narrow grayish lines, and almost sessile, or on very short spirally twisted foot-stalks, more or less opposite, and furnished with a long acute spiny point at the apex. Branches on the stem in whorls, spread out horizontally and extended. Branchlets arranged in two rows laterally, flat, and spreading. Male flowers in globular heads. Fruit drupaceous, oval pointed, fleshy, green, and about the size of a small walnut. Seeds solitary, egg-shaped, tapering much to the apex, one inch long, and three-quarters of an inch in diameter, with a hard, thick, woody shell, more or less fluted on the outside. Seed-leaves in twos, short, and rather rounded at the ends.

A fine evergreen tree, from 60 to 80 feet high, with horizontal, much extended branches, found on the Che-Kiang mountains in the north of China, and on the mountains of Japan.

Gen. CHAMÆCYPARIS. *Spach.* The White Cedar.

Flowers, monœceous, or male and female on the same plant, but separate and terminal. Male catkins cylindrical, female ones globular.

Cones, ligneous, very small, globular or oblong, numerous, and covered with a glaucous bloom.

Scales, mostly seven in number, oblong or rounded, shield-shaped, and in alternate opposite pairs.

Seeds, convex, a little flattened on one side, hard shelled, in sunken grooves, two at the base of each scale, and either wingless or very slightly furnished with rudimentary ones.

Leaves, scale-formed, in opposite pairs, four rowed, with a sunken groove or gland on the back, glaucous and persistent.

Seed-leaves, in twos.

Name, derived from "Chamæ," ground, and "Cyparis," the Cypress—the ground or swamp Cypress.

An evergreen tree, found in North America.

No. 1. CHAMÆCYPARIS SPHÆROIDEA, *Spach*, the White Cedar.

Syn. Cupressus thyoides, *Linnæus*.
„ „ nana-mariana, *Pluknet*.
„ Thuja sphæroidea, *Hort.*
„ „ sphæroidalis, *Richard*.

Leaves in four rows, regularly imbricated, ovate-pointed, and in opposite pairs, seldom spreading at the points, but always in straight lines, of a bright glaucous green, and with a large transparent gland on the back rib. Stem bushy, branching to the ground, particularly on young plants. Branches horizontal, somewhat pendulous, and densely covered at the points, with numerous small branchlets. Branchlets crowded, compressed, long, regularly forked, frequently bent downwards, and covered with small scale-formed leaves. Cones very small, globular, numerous, clustered together, and about the size of a small pea, green when young, but of a glaucous blue or brown colour when ripe. Scales mostly seven in number, shield-shaped, four or five-sided, in opposite alternate pairs, with the odd terminal one the largest, each having a slightly elevated, broad, flat point in the centre, and covering two small round slightly winged seeds at their base in sunken grooves.

A tall evergreen tree, growing 70 or 80 feet high, and three feet in diameter.

It is only found growing in a wild state, in the wet grounds of the maritime districts of New Jersey, Maryland, and Virginia, where it nearly fills all the extensive marshes along the coast. It also occurs in great abundance in the Dismal Swamps near Norfolk, in the State of Virginia, and is found to extend as far as Carolina, but always in swampy places. It is perfectly hardy, and has the following varieties :—

CHAMÆCYPARIS SPHÆROIDEA GLAUCA, *Endlicher.*

Syn. Chamæcyparis Kewensis, *Hort.*
„ Cupressus sphæroidea pendula, *Hort.*
„ „ thyoides Kewensis, *Hort.*
„ „ sphæroidea Kewensis, *Knight.*
„ Retinospora decussata, *Hort.*

This variety differs from the species in being more compact, denser, and in having the branchlets and leaves of a silvery glaucous colour. It is a very beautiful variety.

CHAMÆCYPARIS SPHÆROIDEA ATROVIRENS, *Knight.*

Syn. Chamæcyparis atrovirens, *Hort.*
„ Cupressus thyoides atrovirens, *Lawson.*

This differs in having its branchlets and foliage of a bright shining green, with little or no traces of the glaucous hue of the species.

CHAMÆCYPARIS SPHÆROIDEA VARIEGATA, *Endlicher.*

Syn. Cupressus thyoides variegata, *Loudon.*
„ „ variegata, *Hort.*
„ Thuja sphæroidea variegata, *Hort.*

This variety differs in having some of its leaves and small branchlets of a golden yellow colour intermixed with the green ones; a desirable kind.

CHAMÆCYPARIS SPHÆROIDEA NANA, *Endlicher.*

Syn. Cupressus thyoides nana, *Loudon.*

Syn. Cupressus nana, *Hort.*
„ Thuja sphæroidea nana, *Hort.*

A very distinct, small, compact little bush, of diminutive size, smaller in all its parts, and quite glaucous.

Gen. CRYPTOMERIA. *Don.*

Flowers, monœcious, or male and female on the same plant, but separate; the male catkins numerous, somewhat oblong, and collected in clusters at the extremities of the branchlets; the female ones mostly solitary, or two or three together, without foot-stalks, spherical and terminal.

Cones, globular, woody, and either singly or in clusters.

Scales, wedge-shaped, numerous, loose, and with rough-fringed edges.

Seeds, from three to five under each scale, obovate or angularly depressed, and covered with a crustaceous tegument, prolonged on each side into a regular membrane, cut sloping at both extremities.

Seed-leaves, from two to four in number, but mostly in threes.

Leaves, alternate, in five rows, sickle-shaped, irregularly four-sided, without any foot-stalks, but running downwards at the base, acute-pointed, spreading, and persistent.

Name, derived from "Kruptos," hidden, and "Meris," a part.

All large evergreen trees, found in the north of China and Japan.

No. 1. CRYPTOMERIA ELEGANS, *Veitch,* the Elegant Japan Cedar.

Syn. Cryptomeria Japonica elegans, *Hort.*
„ „ gracilis, *Hort.*
„ „ Japonica elongata, *Regel.*

Leaves linear, narrow, sickle-shaped, rigid, acute-pointed, decurrent at the base, and somewhat distantly placed spirally all round the branchlets, and when fully grown bent backwards; they are slightly channelled on both surfaces, quite smooth, and of a cinerous green colour in summer, but change to a rich bronzy hue in the autumn and winter, and from half to three quarters of an inch long, and about half a line wide near the base. Branches numerous, horizontal, spreading, somewhat flat, and irregularly placed along the stem; lateral branches and branchlets alternate, curved downwards at the points, and in winter of a reddish-brown colour. Cones very similar to those of Cryptomeria Japonica, but the scales are in general longer and much thinner.

A robust pyramidal tree, with a straight stem, from 60 to 100 feet high, found on the Island of Nippon, in Japan.

This tree bears a considerable resemblance to the Araucaria Cunninghamii, is perfectly hardy, and thrives best when planted in a rather moist situation.

No. 2. CRYPTOMERIA JAPONICA, *Don*, the Japan Cedar.

Syn. Cupressus Japonica, *Thunberg.*
„ Taxodium Japonicum, *Brongniart.*
„ Cupressus Cheusanensis, *Plukenet.*

Leaves five-rowed, without any foot-stalks, short-pointed, very close together, incurved or sickle-shaped, compressed on the sides; of a four-sided, rhomboidal shape, running downwards on the under side, and with a sharp, projecting mid rib, from a quarter to three-quarters of an inch in length, bright green, and quite smooth. Branches erect or horizontal, spreading; lateral ones dividing alternately into numerous branchlets, thickly clothed with leaves. Cones about the size of a large cherry, mostly standing singly, but sometimes in clusters on the extremities of the branchlets, and without any foot-stalks, mostly erect, and of a globular shape, but not very compact or solid. Scales numerous, rather loose, of a dull brownish-red colour, and with rough fringed edges. Male flowers on the same tree, intermixed with the young cones, at the extremities of the branchlets, and of a small oval or oblong shape, in large loose clusters. Seeds ripen in September and October.

A tall pyramidal tree, with a straight stem, from 60 to 100 feet high, and four or five feet in diameter, with a brownish-red bark. Wood compact, very white, soft, and easily worked, and much used for various purposes, particularly for cabinet work in Japan.

It is found plentifully about Shanghae and other northern parts of China, in the form of avenues and groves, and where no doubt it has been introduced from Japan. Professor Thunberg, who in the year 1784 first published an account of this tree under the name of Japan Cedar, states that it is found both spontaneous and planted on the mountains of Nagasaki, and elsewhere on the southern mountainous districts of Japan, generally growing in damp soils on a basaltic substratum.

Dr. Siebold, in his "Flora Japonica," calls it a majestic tree, well deserving the name of Cedar; that it grows from 60 to 100 feet high, and four or five feet in diameter, with a pyramidal-shaped head, and rather erect or horizontal branches; that it occurs in great abundance on the three great isles of Japan, and most probably on the smaller ones, and that a tenth part of the forests which cover the skirts of the mountains between 500 and 1200 feet of elevation is composed of this tree. It was first introduced into England by Fortune, in 1844.

The Chinese name for this tree is "San-Suga" (common evergreen), and the Japanese "Suga" (evergreen), or "Suga-Mats" (evergreen fir); and a slight variety of it is sometimes called "araucarioides" in the nurseries, on account of its supposed resemblance to Araucaria Cunninghamii.

CRYPTOMERIA JAPONICA NANA, *Fortune*, the Dwarf Japan Cedar.

Syn. Cryptomeria Japonica pygmæa, *Loudon*.
„ „ nana, *Lindley*.

This variety seldom attains a greater height than two or three feet, and in habit very much resembles a small Juniper bush, in its stunted habit, forming quite a dense bush, with twisted or erect leaves, recurved at the points.

A dense little bush, called "Fi-Suga" (dwarf evergreen) by the Chinese.

CRYPTOMERIA JAPONICA LOBBII, *Hort.*

Syn. Cryptomeria viridis, *Hort.*
„ „ Japonica viridis, *Hort.*

This variety differs in nothing from the original, except in its being of a much brighter green colour, and of more compact growth. It is said to have been introduced from the Dutch Botanic Gardens at Batavia, by one of the Lobbs.

CRYPTOMERIA JAPONICA VARIEGATA, *Hort.*

This variety is beautifully variegated with pale yellow, and, when in good condition, a very attractive kind.

Gen. CUNNINGHAMIA. *R. Brown.*

Flowers, monœcious, or male and female on the same plant, but separate and terminal.

Cones, small, ovate or globular, and ligneous.

Scales, acute-pointed, and without bracteas.

Seeds, three under each scale.

Leaves, lanceolate, rigid, and flat.

Seed-leaves, in twos.

Named by Dr. Brown in compliment to Mr. James Cunningham, who first discovered the plant in China.

A small tree, native of China and Japan.

CUNNINGHAMIA SINENSIS, *R. Brown,* the Chinese Cunninghamia.

Syn. Cunninghamia lanceolate, *Van Houtte.*
„ Belis jaculifolia, *Salisbury.*
„ „ lanceolata, *Sweet.*
„ Abies lanceolata, *Desfontaines.*
„ Pinus lanceolata, *Lambert.*
„ Araucaria lanceolata, *Hort.*

Leaves lanceolate, quite entire, flat, sessile, spreading, rigid, pungent, bent downwards, one inch and a half long, and disposed all round the branches and stems, except on the old lateral ones, where they are arranged in two rows. Branches generally in whorls, lower ones horizontal, but those near the top ascending. Branchlets opposite, in two rows, and spreading. Male catkins terminal in clusters, cylindrical, and near an inch long. Cones globular, three or four together, but sometimes solitary, sessile, drooping, smooth, and about the size of a walnut. Scales ovate, tapering to a sharp point, leathery, sharply denticulated on the margins, thin, and free at the points.

A middle-sized evergreen tree, growing from 30 to 40 feet high, and very much resembling the Brazilian Araucaria in appearance. It is found plentiful in the southern parts of China, and cultivated in Japan.

The Japanese name for this tree is, "Lin-kiu-momi" (the wild or native fir of China), and the Chinese call it "San-Shu" (common evergreen), from its abundance all over China.

CUNNINGHAMIA SINENSIS GLAUCA, *Hort.*

This variety differs from the species in having the leaves on the branchlets of a glaucous colour.

Gen. CUPRESSUS. *Tournefort.* The true Cypresses.

Flowers, monœcious, or male and female on the same plant, but separate; male catkins cylindrical and numerous, female ones roundish, and either in clusters or solitary.

Cones, somewhat globular, and composed of angular, irregularly-shaped, woody scales, externally shield-shaped.

Scales, from six to ten in number, irregularly four or five-sided, raised in the centre, and terminating in a more or less curved point.

Seeds, numerous, inserted on the upper interior surface of the scales, angularly compressed or ovate, with a bony covering, extending into a membranaceous wing at the margins.

Seed-leaves, in twos or threes, rarely in fours, but mostly in twos.

In the true Cupressus the leaves along the branchlets are mere scales, closely imbricated, or tiled over each other, and generally in four rows, with the branches always scattered along the stem, and the buds not scaly. *Cones,* more or less rounded, and composed of from six to ten peltate woody scales, furnished with a projecting point or boss in the centre, and which scales, when the seeds are ripe, become dry and separate. All the species exude resin, but afford no turpentine.

The name *Cupressus,* according to some writers, is derived from the first species having been found plentiful on the Isle of Cyprus; but as the Cypress appears to have been known to the ancient Hebrews, Greeks, and Phœnicians, it is much more probable that the converse is the true statement, and that the island was named from the tree being found plentiful upon it; while according to other writers the name is derived from "Cyparissus," a beautiful youth of the Island of Ceos, who, according to tradition, was changed into a Cypress.

All large bushes or trees, found in the south of Europe, China, California, Mexico, Guatemala, North America, and the East Indies.

No. 1. Cupressus attenuata, *Gordon*, the attenuated-branchletted Cypress.

Syn. Cupressus nivea, *Lobb.*
„ „ Bourgeauii, *Hort.*

Leaves on the young plants distant, spreading, slender, very small, straight, and of a light glaucous green colour, broadest at the base, and tapering to rather a blunt point; those on the laterals much shorter, thicker, and closer together, while those on the adult plants are scale-formed, very short, closely imbricated, and bluntly oval, with a sunken oblong gland on the back, and very glaucous. Branches horizontal, very distant, long, slender, and little forked, lateral ones alternate, very slender, distant, and spread out somewhat in two rows. Branchlets very short, thin, mostly opposite, and very slender, somewhat four-sided, and loosely imbricated. Cones small, terminal, on short scaly foot-stalks, and in large clusters, on the upper branches. Scales irregularly four or five-sided, mostly six in number, shield-shaped, slightly elevated in the centre, and terminating in a short, blunt point, sometimes curved outwards. Seeds rather small, numerous, and surrounded with a dull brown wing or margin, cut sloping at top and bottom.

A fine glaucous bush, growing from six to ten feet high, with numerous straight, small, slender spray, covered with obtuse-pointed leaves, more or less spreading at their points and rather distantly placed, especially towards the base of the branchlets.

This kind was found growing in moist situations, along the banks of mountain streams, in the Shasta country, in Northern California, and in the Oregon territory, by Lobb.

No. 2. Cupressus Balfouriana, *Lemoine*, Balfour's Cypress.

Of this kind very little is at present known, except that it has slender, drooping branches, and closely imbricated, thinly arranged, light, glaucous, green branchlets, and somewhat resembles Cupressus Corneyana, in habit of growth and general appearance.

It has proved hardy in Mr. Cripps's Nursery, at Tunbridge Wells.

No. 3. CUPRESSUS BENTHAMI, *Endlicher*, Mr. Bentham's Cypress.

Syn. Cupressus thurifera, *Bentham.*

Leaves imbricated, opposite, ovate-pointed, and mostly free towards the points, keel-shaped at the back, with a hollow gland in the centre, and, like the branchlets, dark green or very slightly glaucous when young. Branches long, round, spreading, dense, and flat. Branchlets four-sided, slender, and mostly curved and forked. Cones globular, five lines in diameter, produced in great abundance on the outer parts of the branches, and consisting of from eight to ten scales. Scales wrinkled, and shaped like that of an ancient shield, with the outer face convex, terminated with a long prickle in the centre. Seeds numerous, below each scale, and more or less winged.

A tall tree, with an ample, dense head, growing from 50 to 60 feet high, on the mountains of Mexico, at an elevation of from 5000 to 7000 feet, particularly on the mountains of Angangueo and Tlalpuxahua.

It was first discovered by Mr. Hartweg, and described by Mr. Bentham as the Cupressus thurifera of Humboldt, an error which Professor Endlicher afterwards detected, and changed to that of Cupressus Benthami.

Timber fine-grained and excellent.

It is tolerably hardy.

No. 4. CUPRESSUS CORNEYANA, *Knight*, Mr. Corney's Chinese Cypress.

Syn. Cupressus gracilis, *Hort.*
„ „ cernua, *Hort.*

Syn. Cupressus pendula, *Staunton.*
„ Juniperus Corneyana, *Hort.*
„ „ Chinensis Corneyana, *Gordon.*
„ „ gracilis, *Hort.*

Leaves scale-formed, in opposite pairs, very small, stem-clasping at the base, somewhat oval in shape, more or less pointed, rounded on the outside, with a slight depression in the centre, and closely imbricated in four rows, bright green on the adult branchlets, while those on the younger shoots are more acute, transparent on the margins, and with a slight glaucous appearance. Branches slender, alternate, and spreading, with the lower ones somewhat drooping, while those on the upper part of the plant are more or less ascending, and all of a reddish-brown colour. Branchlets long, slender, more or less pendent, cylindrical, quite straight, numerous, regularly two-rowed, and thickly covered with small, bright, glossy, green, scale-like leaves, sometimes a little glaucous in appearance on the young shoots and shaded parts. Cones globular, mostly solitary, and terminal on the shorter branchlets, from half to three-fourths of an inch in diameter, and generally composed of ten scales in opposite pairs. Scales irregularly shield-shaped, four or five sided, and rising in the centre to a broad point, those nearest the apex of the cone being the smallest, most acute, and much more elevated than the rest. Seeds numerous, under each scale, more or less angular, and furnished with membraneous wings on the margins. Seed-leaves in twos.

A very elegant small tree, with slender drooping branches and branchlets, very similar in appearance to those of the female form of the Chinese Juniper (Juniperus Chinensis), especially when young and before fruiting.

It is found in Japan and the northern parts of China, where it is called “Fi-moro” (slender or pendulous), and no doubt the real weeping Cypress of China.

No. 5. CUPRESSUS EXCELSA, *Scott*, the Tall Guatemala Cypress.

Syn. Cupressus Skinneri, *Hort.*
„ „ aromatica, *Van Houtte.*
„ „ Kewensis, *Hort.*
„ „ Californica, *Hort.*
„ Juniperus aromatica, *Hort.*

Leaves on the young plants needle or awl shaped, and glaucous, opposite, in four rows, all decurrent, at the base straight, and tapering to a sharp point at the summit, of various lengths, those on the ends of the branchlets much shorter, closer, and loosely imbricated, while those on the adult branches are ovate, blunt-pointed, in opposite pairs, loosely imbricated, decurrent, and curved inwards at the points; those on the branchlets very much shorter, thicker, ovate, and closely imbricated in four rows. Branches horizontal, slender, short, and spreading. Branchlets very slender, long, little forked, and drooping on the adult plants. Cones globular, in large clusters on the upper branches, nearly three-quarters of an inch in diameter, terminal, and on short, but not very slender, foot-stalks. Scales from six to eight in number, irregularly four-sided, larger ones in the middle, half an inch across, nearly flat on the face, with a short, stout, blunt point in the centre, sometimes a little curved downwards. Seeds rather large, encircled with transparent brown wings, and numerous under each scale.

A large tree, growing 100 feet high, on the mountains of Santa Cruz de Kachequil, in Guatemala, producing excellent timber, which is very durable.

The plants are too tender for the climate of England, and require protection in winter.

No. 6. CUPRESSUS FUNEBRIS, *Endlicher*, the Weeping or Funeral Cypress.

Syn. Cupressus pendula, *Hort.*

Leaves imbricated, partially open or spreading at the points, four-rowed, clasping the stem at the base, acute-pointed, rather three-sided, of a greenish-gray colour, keeled at the back, and thickly set on the branchlets. Branches spreading, forked, loose, scattered, horizontal, curved upwards, and pendulous at the ends; smaller ones long, slender, pendulous, lateral ones alternate, forked, and spreading. Branchlets two-edged, leafy, and rather flat. Cones globose, solitary, on short imbricated foot-stalks, and, when full grown, about half an inch in diameter, and of a brown colour. Scales seven or eight in number, shield-shaped, four or five sided, and uneven round the margins, terminated with a round, blunt point, half sunk in the centre. Seeds angular, surrounded by pale yellow membranous wings.

It is, when old, a most graceful tree, with a straight stem, and long, drooping branches, attaining a height of 60 feet; but when young it has quite an opposite character, being rigid, pyramidal, and quite a compact bush, full of simple, long, lance-shaped leaves, distant and spreading, very glaucous, and not in the least imbricated; but afterwards it assumes, as it gets older, very much the appearance of the Indian Cypress (Cupressus torulosa), which also becomes quite weeping, when old, on the hills of India.

It was first introduced into England by Fortune, from the celebrated tea country, "Wheychou," in the north of China, and who describes it as having the branches growing at first horizontal from the main stem, then describing a graceful curve upwards, and drooping again at the points.

The Chinese name is "Tsain-sung" (common drooping), and the Manchurian one, "Saksin."

No. 7. Cupressus Goveniana, *Gordon*, Mr. Gowen's Californian Cypress.

Leaves imbricated, blunt, thickly set in four rows, and bright grass-green on the old plants, expanded, awl-shaped, very distant, more or less reflexed, sharp-pointed, and rather slender on the young plants. Branches very irregular on the main stem, some being opposite, others alternate, very numerous, slender, and rather pendent; lateral branches spiral, frequently opposite, very dense, and of a beautiful bright green colour. Cones in large clusters, globular, half an inch in diameter, each having from six to eight scales, which are nearly all four-sided, and elevated in the centre to a blunt point. Seeds numerous under each scale, rather small, dark brown, irregularly angular, and membranous at the edges. Seed-leaves mostly in threes, seldom in fours.

This beautiful Cypress was first discovered by Mr. Hartweg, on the western declivity of the mountains of Monterey, in Upper California, within two miles of the sea-shore, in company with Pinus muricata, forming a dense bush, from six to ten feet in height. It is at once distinguished from the great Californian species (C. macrocarpa) by its very much smaller cones, and more spreading, slender, somewhat pendulous branches.

It was named in compliment to J. R. Gowen, Esq., late secretary to the Horticultural Society of London.

It is quite hardy.

No. 8. CUPRESSUS KNIGHTIANA, *Perry*, Mr. Knight's Cypress.

Syn. Cupressus Lindleyi, *Klotsch.*
" " Coulteri, *Forbes.*
" " thurifera elegans, *Hort.*
" " " Knightiana, *Gordon.*
" " elegans, *Low.*

Leaves opposite, scale-like, not compressed at the points, four-rowed, sharp-pointed, loosely imbricated, decurrent, acutely-keeled, with a hollow gland in the centre at the back; very distant, lance-shaped, large and running down the stem at the base, on the leading shoots, glaucous green, and standing free. Branches dark brown, stiff, scattered, rarely opposite, along the stem, the upper ones slightly spreading, the lesser ones horizontal, and frequently bending downwards. Branchlets mostly two-rowed, alternate, closely placed, mostly pointing obliquely outwards, and flattened. Cones globular, eight or ten lines in diameter, very glaucous, smooth, and with eight or ten scales in each. Scales elevated, shield-shaped, and convex in the centre, terminated by a short prickle, and containing under each several flattish winged seeds of a light brown colour.

A handsome, vigorous tree, with a conical head, and all the principal shoots of a beautiful glaucous violet, or reddish plum-colour, growing 120 feet high, and two and a half to three feet in diameter, on the mountains of Mexico. It is much hardier in England than Cupressus Benthami, a kind with which it has been confounded by some writers, on account of their never having seen the living tree; but Mr. Perry, a very accurate observer of Conifers, many years ago detected the mistake, and named this kind in compliment to Mr. Knight, of Chelsea. It has since received other names, as indicated above. Timber excellent.

A fine, strong, growing kind, with the younger branches of a violet or glaucous colour, and the handsomest and hardiest of the Mexican kinds.

CUPRESSUS KNIGHTIANA VARIEGATA, *Hort.*

Syn. Cupressus Lindleyi argentea variegata, *Hort.*

A nice variety, with a portion of the branchlets of a silvery white colour.

No. 9. CUPRESSUS LAWSONIANA,* *Murray*, Messrs. Lawson's Cypress.

Syn. Chamæcyparis Boursierii, *Carrière*, not *Decaisne.*
„ „ Lawsoniana, *Parlatore.*

---

* Among the innovations of some modern botanists, so prolific in the confusion of practical botany, this and Cupressus Nutkaensis have been removed to the genus Chamæcyparis, although both of them have three or more seeds freely inserted on the upper surface of each scale, as in the genus Cupressus, and consequently not in accordance with the genus Chamæcyparis, which has but two seeds under each scale, and in sunken grooves.

Leaves on the adult plants ovate, in alternate opposite pairs, closely pressed, in four imbricated rows, and of a glaucous green colour, while those on the young plants are lanceolate, sharp-pointed, spreading at the ends, and frequently furnished with a small gland on the back. Branches crowded, flexuose, and more or less ascending. Branchlets very slender, flattened on the upper and lower surfaces, much divided, bending alternately inwards and outwards, and thickly covered with decurrent leaves in alternate opposite pairs, closely pressed together on the adult plants, but spreading on the younger ones. Cones solitary, terminal, many-sided, of a light brown colour, covered with a glaucous bloom when young, and about the size of a large pea, and on rather short foot-stalks. Scales mostly six in number, but sometimes more, flat, with a rough external surface, of a corky texture, light brown, and irregularly four or five sided, with an elevated straight point in the centre. Seeds somewhat ear-shaped, rather large, and mostly three under each scale.

A large graceful tree, growing 100 feet high, and two feet in diameter, found in the Shasta and Scots valleys, and, according to Mr. Murray, along the banks of streams in a valley in the mountains of Northern California, in lat. 40° to 42°, where it formed the handsomest tree seen by him in his whole expedition, the habit of the tree being the most graceful, with the branches at first curved upwards, like those of the common Spruce, and towards the ends hanging down like an ostrich feather, with the leading shoots, when young, drooping like those of the Deodar.

This beautiful tree is nearly related, and in some respects somewhat resembles the Cupressus Nutkaensis (syn. Thuiopsis Borealis), but differs in being much slenderer and smaller in all its parts, and of a more graceful habit.

Timber, good, clear, and easily worked, with a strong odour.

It is quite hardy, and has numerous varieties, of which the following are the most distinct :—

CUPRESSUS LAWSONIANA AUREA, *Waterer*, the Golden Variety of Lawson's Cypress.

A pretty variegated variety, with some of the lesser spray and leaves of a golden yellow, scattered all over the plant.

It is a very desirable variety when well variegated, which originated in the nursery of Mr. John Waterer, at Bagshot.

CUPRESSUS LAWSONIANA ALBA VARIEGATA, *Lawson*, Lawson's Variegated Cypress.

Another very desirable variety, with some of the lesser branchlets and leaves of a silvery white, interspersed all over the plant, so as to give it quite a variegated appearance.

It originated in the nursery of Messrs. Lawson, of Edinburgh.

CUPRESSUS LAWSONIANA ARGENTEA, *Hort.*, the Silver-leaved Lawson's Cypress.

This is a strong growing, and somewhat drooping variety, suffused with a silvery glaucous tint, particularly on the younger parts.

It originated in the nursery of Messrs. Waterer and Godfrey, at Knaphill.

CUPRESSUS LAWSONIANA ALBA SPICA, *Hort.*, the Speckled Lawson's Cypress.

A very fine variety, the whole plant being densely and regularly mottled with silvery white specks.

CUPRESSUS LAWSONIANA ERECTA, *Hort.*, the Upright Lawson's Cypress.

Syn. Cupressus Lawsoniana stricta, *Hort.*
„ „ „ pyramidalis, *Hort.*
„ „ „ viridis, *Hort.*

This is a very fine and distinct pyramidal variety, of which there are two forms, one with golden blotched branchlets, and the other of a fine bright green colour.

CUPRESSUS LAWSONIANA FRAGRANS, *Standish*, the Fragrant Lawson's Cypress.

Syn. Cupressus Lawsoniana aromatica, *Hort.*

This is a fine strong-growing variety, with rather slender, drooping branches, and glaucous branchlets; and a very desirable kind, on account of the very agreeable aromatic smell it emits when handled.

CUPRESSUS LAWSONIANA LUTEA, *Rollisson*, the Yellow Lawson's Cypress.

This is a very fine and constant variety, with the whole of the younger branchlets of a deep golden yellow. It is in the Tooting Nursery, and one of the very best of the golden-tinted kinds.

CUPRESSUS LAWSONIANA LUTEA FLAVESCENS, *Cripps*, the Light Yellow Lawson's Cypress.

This is a very pretty and distinct variety, with all the branchlets of a very pale, greenish-yellow colour, which originated in Mr. Cripps's nursery, at Tunbridge Wells.

CUPRESSUS LAWSONIANA NANA, *Hort.*, the Dwarf Lawson's Cypress.

Syn. Cupressus Lawsoniana glauca nana, *Hort.*
„ „ „ pumila, *Hort.*

A nice compact, dwarf variety, with numerous short, slender, glaucous branchlets, closely imbricated, with small ovate leaves. This kind rarely exceeds one or two feet in height.

CUPRESSUS LAWSONIANA GRACILIS, *Hort.*, the Slender Lawson's Cypress.

An elegant variety, forming a dense bush, with a beautiful feathery appearance, and a deep glossy green colour.

Cupressus Lawsoniana minima, *Hort.*, the Miniature Lawson's Cypress.

Syn. Cupressus Lawsoniana pygmæa, *Hort.*

A curious, glaucous, pigmy variety, only suited for planting on rockwork.

Cupressus Lawsoniana pendula alba, *Paul*, the Pendulous Lawson's Cypress.

A fine graceful variety, with pendulous branches, and branchlets of a beautiful, shining, silvery hue.

No. 10. Cupressus Lusitanica, *Miller*, the Cedar of Goa.

Syn. Cupressus glauca, *Lamarck.*
„ „ pendula, *Heritier.*
„ „ glauca pendula, *Hort.*
„ „ „ tristis, *Carrière.*
„ „ Lusitanica pendula, *Hort.*
„ „ „ patula, *Tournefort.*
„ „ Sinensis, *Lee.*
„ „ „ pendula, *Hort.*
„ „ „ glauca, *Van Houtte.*
„ „ Libani glauca, *Knight.*
„ „ Goensis, *Hort.*
„ „ Lusitanica elegans, *Rinz.*
„ „ „ tristis, *Carrière.*

Leaves imbricated, opposite, four-rowed, acute, glaucous, keeled, and marked with a hollow gland on the back, stem clasping and adhering, except at the points, broad at the base, and tapering to an awl-shaped point. Branches spreading, divided, flexuose, horizontal, turned down at the points, scattered on the stem, and rather distant; smaller ones branching out, and nearly pendent. Branchlets four-sided when young, but rounded when old, crowded, forked, spreading, incurved, pendulous, and very numerous. Cones globose, three-quarters of an inch in diameter, covered with a glaucous gray powder, solitary, and on the points of the short lateral branche.. Scales shield-shaped, six or eight-angled, and elongated into a reflexed broad point, terminated by a small prickle. Seeds yellowish and numerous, under each scale.

A rather pendulous growing tree, attaining a height of 50 feet, growing plentiful in Spain and Portugal, particularly at Bussaco, near Coimbra, in Portugal, but introduced into those countries from Goa, in the East Indies, where it grows to an equal size with those of Spain and Portugal.

It is rather tender in the climate of London.

This species varies very much when raised from seed, producing plants quite dissimilar in appearance, some being quite twiggy and pendulous, while others are more branching and stiffer, and of all shades, from dull green to quite a glaucous white; hence the reason why so many different names are applied to this species and its variations, when perpetuated by cuttings or other artificial means by dealers.

It is uncertain whether Goa or Cintra be its native spot, or whether both had it from China.

Cupressus Lusitanica variegata, *Lawson.*

This differs only in having white leaves intermixed on the branchlets with the ordinary ones.

No. 11. Cupressus Macnabiana, *Murray*, Mr. MacNab's Cypress.

Syn. Cupressus glandulosa, *Hooker.*
„ Juniperus Macnabiana, *Lawson.*

Leaves in opposite pairs, distant, and spreading, broadest at the base, glaucous, and tapering to a sharp point, decurrent and keeled, with a hollow gland upon the under side on young plants, while on the adult plants they are much shorter, blunter pointed, thicker towards the ends, loosely imbricated, and with a large hollow gland in the centre on the outside. Branches short, mostly opposite, thickly set on the stem, and curved upwards at the points. Branchlets short, dense, slender, stiff, and closely covered with small, oval, blunt-pointed leaves in four rows. Cones globular, three-quarters of an inch in diameter, frequently clustered on the upper branches, or singly, on short, thick, woody foot-stalks. Scales in opposite pairs, mostly six in number, rather more than half an inch across, irregularly four-sided, each elevated in the centre, and terminated with a stout, blunt point, sometimes slightly curved, particularly on the half-grown cones. Seeds mostly angular, but sometimes rounded, and with scarcely any trace of the wings.

A compact, rather pyramidal, glaucous bush, growing from six to ten feet high.

It was first discovered by Mr. Jeffrey, on the Shasta mountains, in Northern California, in lat. 41°, at an elevation of 5000 feet, and afterwards by Mr. Murray in the same country, who transmitted seeds to Messrs. Lawson. This beautiful Cypress is perfectly hardy, and must not be confounded with a more slender and less ornamental kind, substituted for it by an importer of Californian Conifers.

No. 12. CUPRESSUS MACROCARPA, *Hartweg*, Lambert's Cypress.

Syn. C. Lambertiana, *Gordon.*
„ „ macrocarpa fastigiata, *Knight.*
„ „ Reinwardti, *Hort.*
„ „ Lambertiana fastigiata, *Carrière.*
„ „ Hartwegii, *Carrière.*

Leaves ovate, imbricated, in four rows, bright grass green, and closely set upon the old plants; they are expanded, awl-shaped, sharp-pointed, and thickly set upon the young plants. Branches irregularly spiral, but sometimes alternate or opposite, younger ones and laterals opposite, dense and quite green, older branches dark brown, and nearly horizontal from the main stem. Cones in clusters of three or four together, oblong, one inch and a half long, and one broad, with ten scales, the larger dark brown, and more or less angular. Seed-leaves in fours, but sometimes only in threes. Seeds angular.

In the year 1838 the late Mr. Lambert distributed among his friends a few seeds of this Cypress, without any name or indication from whence he had obtained the seeds, and from these seeds plants were raised, which, when large enough, were at once seen to be very distinct from any previously known; and I gave to it the name of C. Lambertiana, in compliment to the late Mr. A. Lambert, and to mark from whence they were first obtained. Nothing, however, was ascertained further concerning the country from whence it came until some two years afterwards, when I observed at Mr. Low's nursery, at Clapton, a plant of the same kind, which had been received from Dr. Fischer, of St. Petersburg, as a new species from California. At a later period Mr. Hartweg, when in Upper California, discovered it, and finding it had very large fruit, gave it the name of Cupressus macrocarpa, and which, having been published in his Journal, takes precedence of my unpublished though general known name of C. Lambertiana. It is identically the same plant, although some persons endeavour to make them distinct varieties; that there is some difference in the shape of the plants may be, but then that arises from all those plants known under the name of C. Lambertiana being raised from cuttings, while all those called C. macrocarpa are seedlings, and have a more pyramidal-shaped head, while the cutting plants (C. Lambertiana*) have a horizontal and rather flat-headed appearance.

It is one of the finest Cypresses yet introduced, on account of its beautiful bright green aspect, its great size and hardiness. Mr. Hartweg found it forming a tree 60 feet high, with a stem nine feet in circumference, on the wooded heights near

---

* The original seedling plants of what is called Cupressus Lambertiana, had the same erect habit as those of Cupressus macrocarpa; and if the points of the leading shoots are taken off young seedling plants of Cupressus macrocarpa, the plants will afterwards assume the same spreading habit as those known as Cupressus Lambertiana.

Monterey, in Upper California, and with a far-spreading, branching flat top, like a full-grown Cedar of Lebanon, which it very much resembles when old. It is hardy, and will grow in almost any kind of soil which is not very poor.

CUPRESSUS MACROCARPA CRIPPSI, *Hort.*, Cripps's Variegated Large-fruited Cypress.

Leaves small, open, erectly-spreading, rigid, very acute and spiny-pointed; and when young, of a beautiful silvery hue, particularly those towards the ends of the shoots. Branches short, stout, stiff, and very compact; branchlets excessively numerous, small, slender, stiff, very dense, and of a silvery white at the points when young.

This fine and very distinct variety was raised in the nursery of Mr. Cripps at Tunbridge Wells, from an imported seed of Cupressus macrocarpa.

It is perfectly hardy, and a very striking variety, totally distinct from the original form.

CUPRESSUS MACROCARPA FLAGELLIFORMIS, *Cripps*, the Whip-cord-branched Cypress.

This variety is more open and slenderer than the species, with the branches spreading and somewhat bent down at the ends, and the branchlets and smaller spray long, less divided, and of a light glaucous green.

A fine graceful variety, of which there are plants in Mr. Cripps's extensive collection at Tunbridge Wells.

CUPRESSUS MACROCARPA VARIEGATA, *Hort.*, the Variegated Large-fruited Cypress.

This variety only differs from the original form in having a portion of its branchlets of a golden hue.

No. 13. Cupressus Nutkaensis, *Hooker*, the Nootka Sound Cypress.

Syn. Cupressus Tchugatskoyæ, *Hort.*
„ „ Nootkaensis, *Lambert.*
„ „ Americana, *Trautvetter.*
„ Thuia excelsa, *Bongard.*
„ Thuiopsis Borealis, *Fischer.*
„ „ Tchugatskoyæ, *Carrière.*
„ Chamæcyparis Nutkaensis, *Spach.*
„ „ excelsa, *Fischer.*

Leaves in four rows, in opposite pairs, broadly ovate at the base, sharp-pointed, and one-eighth of an inch long, very thick, smooth, of a glossy green, sometimes a little glaucous when young, on the upper side, and pale, dull green below, convex on the back, decurrent, and closely adhering at the base; adult ones much shorter, awl-shaped at the points, keeled on the back, without any gland, but furrowed, and closely imbricated; those on the young plants glaucous, somewhat lanceolate, quite straight, extended at the points, loosely imbricated, and bristle-pointed. Branches round, spreading, or curved upwards towards the ends, but sometimes those near the bottom of the trees are more or less deflected; scaly from the withered leaves, and of a brownish colour; lateral ones in two rows, regularly placed alternately on each side, flat and flexible; branchlets in two rows, four-sided, rather distant, extended, and thickly covered with short, straight, regularly imbricated leaves. Cones solitary, globular, almost sessile, or on the ends of very short, scaly branchlets, about the size of a large pea, and covered with a glaucous bloom. Scales small, rough, and from six to eight in number, embossed, shield-shaped, with four or five angular or orbicular sides, elevated in the centre, in alternate opposite pairs, furnished in the middle with a straight, thick, conical, obtuse point, the lower pair much the thinnest, and very closely inserted at the base. Seeds mostly three under each scale, freely inserted on the interior of the upper surface of the scales, flat, and ear-shaped, with a bony shell and membranous wings along each side, frequently much broader than the seeds, and cut more or less sloping at top and bottom.

A fine tree, growing in favourable situations from two and a half to four feet in diameter, and rising to a height of from 80 to 100 feet, with a straight stem, covered with rather a soft, smooth, dark-coloured bark, and well furnished with an ample branching and much-divided head; timber white and soft, but affording, in considerable quantities, a strong aromatic balsam, somewhat resembling the Canadian balsam in taste and smell.

It is found along the north-west coast of North America, particularly at Nootka Sound, in Observatory Inlet, and on the Island of Sitcha, and is called "Tchugatskoy" (the Savin, or strong-scented Fir) by the Russian settlers on the Island of Sitcha, and about Nootka Sound, and was first introduced into England in 1851, through the Russian garden at St. Petersburgh, under the improper name of Thuiopsis Borealis, a name given to it by the late Dr. Fischer.

It is quite hardy, and has the following variety :—

CUPRESSUS NUTKAENSIS VARIEGATA, *Hort.*

Syn. Thuiopsis Borealis variegata, *Hort.*
„ Cupressus Nutkaensis argentea, *Hort.*

This variety differs in having a considerable number of the ends of the smaller branchlets of a pale yellow, or white colour intermixed with the ordinary green ones.

No. 14. CUPRESSUS SEMPERVIRENS, *L.*, the Upright Cypress.

Syn. C. fastigiata, *D. C.*
„ C. stricta, *Miller.*
„ C. pyramidalis, *Tozzett.*
„ C. Tournefortii, *Audibert.*
„ C. fœmina, *Cæsalpin.*

Leaves imbricated, in four rows, small, deep, shining green, closely pressed to the stem, convex, blunt, or pointed on young plants, and persistent. Cones large, globular, one inch or more in diameter, with numerous large, woody, angular scales, slightly convex and mucronate in the centre, and separating when the seeds are ripe. Seeds numerous under each scale, yellowish brown, irregularly angular, and covered with a thin membranous skin.

An evergreen tree, growing in its native country 50 or 60 feet high, with all its branches growing in an upward direction, and closely pressed to the stem, like those of the Lombardy Poplar.

The Upright or Common Cypress is a native of Greece, Asia Minor, the south of Europe, and Persia, and cultivated in all the countries along the Mediterranean, and throughout the whole of Italy, from the foot of the Alps to Calabria, as well as in Sicily and Turkey. There are the following varieties :—

CUPRESSUS SEMPERVIRENS HORIZONTALIS, *Miller*, the Horizontal Cypress.

Syn. C. expansa, *Audibert.*
„ C. Orientalis, *Hort.*
„ C. mas, *Cæsalpin.*
„ C. horizontalis, *Du Hamel.*
„ C. fastigiata horizontalis, *D.C.*

This differs in no way from the upright kind, except in its manner of growth,—it having its branches disposed in a horizontal direction, and very spreading, and only grows to about half the height of the upright kind.

It is found indigenous in Candia, Bithynia, and Persia, mixed with the upright kind; and some writers consider it a distinct species, but the question as to whether the upright and spreading Cypresses are forms of the same, or two distinct species, is now well ascertained, and that both are only one species, for seeds of the horizontal variety will produce plants varying in shape and appearance from the spreading to the most upright form of the plant, while seedlings raised from the upright, only produce plants with a tapering or conical-shaped head; and this may have led Cæsalpin, and other ancient writers, to consider one the male, and the other the female Cypress.

CUPRESSUS SEMPERVIRENS MONSTROSA, *Hort*, the Thuja-like Common Cypress.

Syn. Cupressus sempervirens thujæfolia, *Carrière*.
„ „ thujæformis, *Parker*.
„ „ thujæoides, *Low*.

A fine tall variety of the common upright Cypress, with its branches strictly erect, and the branchlets flat, and regularly placed horizontally in two rows; leaves scale-formed, regularly imbricated, and with the smaller spray very much resembling those of the common Arbor-Vitæ, but not near so dense.

CUPRESSUS SEMPERVIRENS VARIEGATA, *Knight*.

Syn. C. fastigiata variegata, *Hort*.

This only differs in having some of its shoots and leaves of a pale yellow or white colour intermixed.

No. 15. CUPRESSUS TORULOSA, *Don*, the Twisted or Bhotan Cypress.

Syn. Cupressus Cashmeriana, *Hort*.
„ „ Nepalensis, *Loudon*.
„ „ pendula, *Griffith*.

Leaves very small, ovate, scale-formed, smooth, regularly and closely imbricated in four rows, or slightly spreading, acute, more distant, much longer, and very glaucous, with a yellow tint on the young plants, but of a more greenish hue, with a tinge of gray on the adult ones. Branches spreading, alternate, or irregularly placed along the stem; lateral ones short, numerous, mostly in two rows, and slightly bent downwards; branchlets, drooping on each side, and considerably subdivided; from two to six inches long, closely covered by numerous oval-pointed, imbricated, scale-like leaves, arranged in four rows resembling small green cord. Cones globular, or somewhat oblong, from three-quarters to one inch long, and produced in great abundance in dense clusters, each cone consisting generally of ten scales, of the shape of a shield, with from four to six convex facets, rising into a kind of boss in the centre, which is stiff and woody when ripe, and furnished in the centre with a short, reflected, spiny point. Seeds small, nearly flat, of a light brown colour, with a narrow wing round the border, and from six to seven under each scale. Seed-leaves only two in number.

A fine pyramidal tree, with numerous short, slender, horizontal, or sometimes deflected branches to near the ground, and drooping branchlets. It is found in great abundance in Northern India, at elevations of from 4000 to 8000 feet.

It grows to a great size; trees from ten to fifteen feet or more in girth are common, and one at a place called "Urcho," in the Kothee State, north of Simla, is said to be six or seven feet in diameter. Major Madden says the Lime Stone Mountains of "Nynee Tal" are covered from 4500 to 6200 feet with clumps of the most stately trees, the height of many of them at least 150 feet, and all as straight as an arrow, with the branches drooping slightly towards the ground, and so arranged as to make the tree appear a perfect cone—the largest specimen measured by him being sixteen feet and three-quarters in girth at five feet from the ground, and the spread of its branches twenty-four feet on each side; but about twelve feet is the average girth of the finer specimens at "Nynee Tal," where the tree is commonly called "Raisulla," or King Pine. It seems to be unknown as an indigenous tree in North-West Kamaon, but in South-East Gurhwal it is in abundance at from 7000 to 8000 feet of elevation. It is the Weeping Cypress of travellers in the Himalayas.

This tree is called "Gulla," "Gulrai," and "Kullain," by the mountaineers about Simla, all variations in their vernacular for Divine Tree, and according to Royle, it is called "Shujrutulhue-yut" (tree of life), and that its fruit and branchlets are said to be a cure for all diseases, but that the profanation of its divine timber by any one to a useful purpose of economy would be sure to bring down upon the individual sudden death.* The Bhotiyas also hold it sacred, and call it "Surroo," or "Soorah-vyu" (name divine), while on the other hand the people of Kamaon, who seem to look more to temporal than spiritual things, do not appear to hold this Cypress in much religious veneration, but, on the contrary, use its timber freely in their house-building, where it is considered very durable, but too flexible for any position where it has to sustain a heavy weight. The wood is yellowish red, exceedingly fragrant, close-grained, tough, long-fibred, very hard, and considered equal to that of the Deodar for durability; the larger trees not unfrequently attain to an enormous size, some of them having a girth of twenty-seven feet, but at its greatest altitude it gets dwarfed down to a mere bush, and is nowhere to be found beyond from 7000 to 8000 feet of elevation, and like the Deodar, seems indifferent to geology, growing equally well on clay-slate, dolomatic limestone, gneiss, and mica-slate; but a dry and somewhat sunny site seems essential for its full development.

Timber white, with a tint of red and yellow; is exceedingly fragrant, and considered equal to that of the Deodar for durability. Bark, reddish brown, peeling off in numerous long stripes, and frequently appears twisted, which is supposed to have suggested its specific name (torulosa). The wood and branches are burnt in sacred rites, as incense, among the Hindoos, both to please the gods, and scare away evil demons.

---

* Major Madden relates, while travelling in Kooloo and the Ladakh country, some of his people had begun to strip the cypress trees of their dry branches for fuel, when one of the conductors of his caravan came to him in great agitation, and implored him to command the men to desist, as the trees, he said, were sacred to the deities of the elements, who would be sure to revenge any injury done to them, by visiting them with heavy snows and bad weather on their journey.

It is more or less tender in England, and has the following varieties :—

CUPRESSUS TORULOSA VIRIDIS, *Hort.*

This variety differs in having all its parts of a bright glossy green, and rather slenderer than the species.

CUPRESSUS TORULOSA MAJESTICA, *Hort.*

Syn. Cupressus majestica, *Knight.*

This kind differs in nothing from the ordinary form of the species except in its more robust appearance, being much larger in all its parts, and much hardier, and no doubt the large kind found on the mountains of Cashmere and Nepal.

CUPRESSUS TORULOSA NANA, *Hort.*

Syn. Cupressus torulosa elegans, *Hort.*
„ „ „ religiosa, *Knight.*
„ „ religiosa nana, *Hort.*

This variety differs from the species in being very much smaller in all its parts, more compact, and very dwarf.

No. 16. CUPRESSUS THURIFERA, *Humboldt*, the Incense-bearing Mexican Cypress.

Syn. Cupressus Uhdeana, *Gordon.*
„ „ Schomburgkii, *Van Houtte.*
„ „ tetragona, *Hort.*
„ Chamæcyparis thurifera, *Endlicher.*
„ Juniperus thurifera, *Bonpland.*

Leaves in four rows, ovate-lanceolate, imbricated, smooth, very glaucous, without any foot-stalks, and pointed ; those on the adult plants are much broader, more ovate, thicker, and blunt pointed, with a deep sunken groove along the back, and more closely imbricated than those on the young plants, which are much more pointed, longer, narrower, and spreading at the points; one line long, and of a glaucous green colour. Branches spreading out horizontal, much divided, reflexed at the ends, scattered, and rather distant along the stem; lateral branches flat, subdivided, two-rowed, and spreading widely. Branchlets four-sided, straight, regularly placed in two rows along the sides of the lateral branches, of a bright glaucous green, and thickly covered with small imbricated foliage. Cones solitary, rather small, globular, and of a brownish colour, covered with a glaucous bloom, half an inch broad, and rather more in length, on very short foot-stalks, and mostly composed of six or eight scales, with a small terminal prickle or rudimentary scale on each, near the apex. Scales convex, shield-shaped, rounded on the margins, rarely angular except on the upper ones, in opposite cross pairs, the four lower or outer ones being connected at their base, much the largest, and flattened on the sides, while the inner or central ones are long, narrow, shield-shaped on the top, and spring from the centre of the others, and generally abortive or one-seeded; while the alternate pairs of the others contain two or three seeds under each, of a brown colour, and nearly flat. Seeds obovate, sometimes a little flattened on one or two sides, hard-shelled, and with triquetrous wings.

A handsome tree, 50 feet high, with horizontal spreading branches, reflected at their extremities, and frequently pendent. It is found on the mountains of Mexico, particularly in the forests of Tasco and Tehuilotepic, at an elevation of 5500 feet. Mr. Udhe found it a handsome tree, 60 feet high, with a dense, bushy head, on the Orizaba and Real del Mont mountains, in high exposed situations, at an elevation of from 6000 to 7000 feet.

This kind has a number of small white specks irregularly scattered over the smaller spray, which form scale-like glands on the backs of the minute leaves.

It is one of the hardiest and finest of the Mexican kinds.

No. 17. CUPRESSUS WHITLEYANA, *Hort.*, the Upright Indian Cypress.

Syn. Cupressus sempervirens Indica, *E. I. Comp.*
„ „ Roylei, *Carrière.*
„ „ Australis, *Low.*
„ „ Doniana, *Hort.*

Leaves on the younger plants in opposite pairs, distant, spreading, and of a slight glaucous green colour, awl-shaped, widest at the base, decurrent, and tapering to a sharp point, from two to four lines long, quite straight, and thinly set on the branches, while those on the adult plants are very small, oval, blunt-pointed, closely imbricated, regularly in four rows, thickened towards the point, and glossy green. Branches numerous, erect, rather distant, and thin on the young plants, but dense and closely compressed on the older ones, and forming a pyramid. Branchlets erect, numerous, mostly pointing upwards, thickly covered with foliage, and four-sided. Cones large, globular, one inch in diameter, and very much resembling those of the Common Cypress. Scales rather small, mostly eight or ten in number, nearly flat, or slightly elevated in the centre, with a very uneven surface, and short, blunt point. Seeds large, with rather a broad wing surrounding the seed.

A tall, pyramidal tree, according to Mr. Elphinstone, growing 100 feet high in the gardens of Kohaut and Peshawur. The tall Cypress is also found plentiful in Nepal and the Kooloo country, and very much resembles the Common Cypress when old, but has not so close or dense a head when young.

It is rather tender, but about as hardy as Cupressus torulosa, with which Indian travellers frequently confound it, although one is upright, and the other pendulous when old.

DOUBTFUL SPECIES.

CUPRESSUS CORNUTA, *Carrière*, the Horn-scaled Cypress.

Of this kind nothing is known, beyond Carrière's figure and description in the *Revue Horticole*, and that Professor Parlatore considers it a monstrous form of Cupressus Goveniana, with the scales on the cones drawn out and horn-shaped.

Gen. DACRYDIUM. *Solander.*

Flowers, diœcious, or male and female on separate plants.

Fruit, fleshy and erect.

Seeds, with a hard, bony shell, resting in a short, disk-formed, fleshy integument.

Leaves, needle-shaped or scale-formed, and opposite.

Name, derived from δακρυ (dakru), a tear, the gummy exudation of the trees.

Trees and shrubs, natives of Tasmania, New Zealand, the East Indies, and New Caledonia.

No. 1. DACRYDIUM ARAUCARIOIDES, *Brongniart,* the Araucaria-like Dacrydium.

Syn. Arthrotaxus araucarioides, *Brongniart.*
„ Dacrydium arthrotaxoides, *Carrière.*

Leaves small, spirally disposed, imbricate, erectly incurved, adnate at the base, free on the upper part, oblong, or ovate-oblong, rounded at the points, convex and keeled on the back, and about one-sixth of an inch long, and half a line wide.

A very branching shrub, with erect, short, thick branches, and very numerous, short, cylindrical branchlets, from one-sixth to a quarter of an inch in diameter, thickly covered with small, incurved, blunt-pointed, oval-oblong leaves.

It is a very handsome and compact shrub, with the aspect of an Arthrotaxis, found on the Arid Mountains, near Mont Dore, and those of Kanale, in New Caledonia.

No. 2. DACRYDIUM BECCARII, *Parlatore,* Mr. Beccari's Dacrydium.

Leaves densely disposed in six rows, erectly-spreading, curved, long-linear, soft and bristle-pointed, or acutely spinescent, and all of a size and shape. Branches and branchlets dense, and thickly covered with leaves. Fruit solitary, sessile, somewhat orbicular or oval, fleshy, smooth, and one line and a half long, and one line broad; enclosed at the base by the outer involucra, and produced at the points of the branchlets.

A very elegant shrub or small tree, from 12 to 15 feet high, with a dense flat head, found on the top of the Poe Mountain, near Sarawak, in Borneo, at an elevation of 5000 feet.

No. 3. DACRYDIUM COLENSOI, *Hooker*, Colenso's Dacrydium.

Syn. Podocarpus biformis, *Endlicher*.
" Alania sp., *Colenso*.

Leaves many-shaped on the same branch, while on others they are all uniform, some densely four-rowed, regularly imbricated, ovate, rhomboid, bluntly-pointed, and one line long, while others are long-linear, loosely spreading, and from three to six lines long, all leathery, of a bright glossy green, and strongly ribbed; again, others are scale-formed, somewhat triangular, obtuse, very closely arranged, regularly imbricated, and densely four-rowed. Branches long, and variably disposed, some ascending, others pendent, while the greater part are spreading and more or less horizontal. Male catkins terminal, solitary, and without foot-stalks. Fruit small, lateral, leathery, and placed on a horizontal, resinous disk, in the form of a cup.

A shrub or small tree of many forms, with the branches either ascending, spreading, or prostrate.

Mr. Bidwill found it on the western part of the northern island of New Zealand, at Dusky Bay, and on the mountains of Tongariro, Rahuine, and Nelson, at elevations varying from 4000 to 6000 feet.

No. 4. DACRYDIUM CUPRESSINUM, *Solander*, the Cypress-like Dacrydium.

Syn. Thalamia cupressina, *Sprengel*.
" Dacrydium Lobbii, *Hort*.

Leaves awl-shaped, more or less four-sided, very dense, rigid, alternate, irregularly decussate, sometimes loosely imbricated, or spreading, fully adhering at the base, and decurrent; a quarter of an inch long, thickest at the base, tapering to an obtuse, rounded point, and of a pale, yellowish-green colour. Branches scattered along the stem; lower ones spreading or deflected; upper ones more or less ascending, regularly forked, and much divided; lateral ones at irregular distances, forked, slender, long, and pendent. Branchlets filiform, very slender, quite straight, seldom divided, gracefully drooping, thickly covered with foliage, and of a pale, yellowish green, sometimes a little copper-coloured. Male catkins without foot-stalks, oblong or ovate, and terminal; female flowers terminal, and enclosed in an involucrum, which forms a sort of cup. Fruit solitary and terminal, in the form of a small red berry, containing a black seed, and eaten by the natives.

A noble tree, growing 200 feet high, and 15 feet in circumference, with pendent branches, and long, slender, drooping shoots, thickly clothed with small, spiny leaves, and very much resembling some of the Lycopodiums. It is found in vast forests on the southern and middle islands of New Zealand, particularly on the great mountains behind Dusky Bay, where the settlers call it the Native Spruce Fir, and the New Zealanders "Dium," or "Rium."

It is not hardy.

No. 5. DACRYDIUM ELATUM, *Wallich,* the Lofty Dacrydium.
Syn. Juniperus elata, *Roxburgh.*
„ „ rigida, *Sieber.*
„ „ Philippsiana, *Wallich.*
„ Lycopodium arboreum, *Jungh.*
„ Dacrydium Junghuhnii, *Miquel.*

Leaves either needle-shaped, four-cornered, acute-pointed, somewhat erect, and spreading, or scale-formed, ovate-obtuse, rarely acute, and closely depressed, alternate, very dense, and from four to seven lines long; those on the stem and lower part of the principal branches much shorter, more distant, wider, decurrent, and slightly spreading at the points, while those on the lesser branches and branchlets are needle-shaped, almost cylindrical, spreading, slightly angular, compressed, and very much smaller on the adult trees. Branches numerous, scattered along the stem, with the lower ones spreading or bent downwards, and the upper ones mostly ascending. Branchlets slender, pendent, numerous, and thickly clothed with foliage; those of the adult trees being very much shorter, and covered with small, scale-formed leaves, regularly imbricated. Fruit ovate, bluntly four-cornered, and solitary on the ends of the branchlets.

A loftly, pyramidal tree, with a cylindrical stem, covered with an ash-gray bark, slightly furrowed, and very full of branches, found on the mountains of Sumatra and Pulo-Penang, in the East Indies, where its native name is "Gambinur."

It is very tender.

No. 6. Dacrydium Franklinii, *Hooker*, Captain Franklin's Dacrydium, or Huon Pine.

Syn. Dacrydium Huonese, *Cunningham.*

Leaves small, scale-formed, very closely pressed, and somewhat spirally decussate, ovate, rhomboid, and closely imbricated, convex, and somewhat acutely keeled on the back, with the inner face concave, and acute or obtuse pointed, decurrent at the base, and deep, glossy green, dotted on the outer sides with a glaucous powder. Branches ascending or spreading, sometimes more or less deflected towards the bottom on the adult trees, lateral ones very much loaded with branchlets. Branchlets very numerous, dense, long, slender, and flexible. Male catkins solitary, terminal on the ends of the branchlets, oval, or rounded, and from one to two lines long. Fruit small, and in terminal spikes.

A large, pyramidal tree, with spreading or pendent branches, thickly clothed with spray, growing 100 feet high, and 20 feet in circumference, found in Van Diemen's Land (Tasmania), on the banks of the Huon River, and at Port Macquarrie. Timber excellent for naval purposes.

It is tolerably hardy in the west of England.

No. 7. DACRYDIUM KIRKII, *Mueller*, Mr. Kirk's Dacrydium.

Leaves on the sterile branchlets somewhat long, linear-elongated, obtuse at the points, and spreading; while those on the fertile ones are curved, regularly imbricated, rhomboid, small, obtuse, and rather compressed. Fruit small, oval, somewhat compressed and lateral.

This kind forms a bush or small tree, very nearly related to Dacrydium Colensoi, found in New Zealand by Mr. Thomas Kirke.

No. 8. DACRYDIUM LAXIFOLIUM, *Hooker*, the Loose-leaved Dacrydium.

Leaves linear-obtuse, leathery, convex, and channelled on the upper surface, tapering to the base, but not decurrent, the lower ones loosely spreading, flaccid, and seldom exceeding two lines in length, while those on the upper branches and branchlets are oval, imbricated, much shorter, and keeled on the back. Branches loosely pendent or prostrate. Branchlets very slender and graceful. Fruit terminal on the ends of the branchlets, solitary, and erect.

A dwarf little shrub, not growing more than three feet high, but creeping along the ground, and very much resembling the common crowberry (Empetrum nigrum). It is found on the mountains of Nelson, at an elevation of from 6000 to 7000 feet, and on Mount Tongoriro, in New Zealand. The native name is "Rimu."

It is tolerably hardy in the west of England.

No. 9. DACRYDIUM TAXOIDES, *Brongniart*, the Yew-like Dacrydium.

Syn. Podocarpus taxodioides, *Carrière*.

Leaves alternate, closely placed, falcate, obtuse at the ends, attenuated and twisted at the base, from half to three quarters of an inch long, and one line and a quarter broad, with the mid-ribs on the upper and under surfaces prominent.

A conical shrub, with subverticillate branches, which have a purplish tint when young, found on the wooded mountains near Balade, in New Caledonia.

Gen. DAMMARA. *Rumphius.*

Flowers, diœcious, or male and female on separate plants.

Cones, ovate or globular, and axillary.

Scales, persistent, and without bracteas.

Seeds, unattached, and solitary.

Seed-leaves, in twos.

Leaves, petiolated or almost sessile, opposite or alternate, and leathery.

Name, derived from its native one in Amboyna, where the Malays call it Dammar "puti," or "batu," on account of the large quantity of resin it produces, which at first is soft, viscid, and transparent, but eventually becomes hard, and like amber.

All large trees, natives of the East Indian Islands, New Zealand, New Caledonia, and New Guinea.

The Dammaras are distinguished from the true Pines and Firs by their broad, opposite, or alternate oblong-lanceolate, attenuated, leathery leaves, with parallel veins, and in the male and female flowers being solitary and on separate plants; they, however, approach nearest to the genus *Araucaria* in being diœcious, but from which they differ in the form of the scales, in the absence of a bractea to each female flower, and in the seeds being winged only on one side, and free, or unattached.

No. 1. Dammara Australis, *Lambert,* the Kauri Pine.

Syn. Agathis Australis, *Salisbury.*
„ Podocarpus zamiæfolius, *Richard.*

Leaves linear-oblong, rarely elliptic, flat on both sides, alternate and distant on the stem and larger branches, but much closer, opposite and somewhat two-rowed on the branchlets; from one and a half to two inches and a half long, and from one-half to three-quarters of an inch broad at the widest part, thick, leathery, sometimes falcate, of a shining greenish-brown colour, sometimes spotted on the upper part, and of a reddish copper colour, much less glossy on the under side, frequently twisted and tapering to the base, obtuse at the ends, and without foot-stalks. Branches of a large size, spreading, numerous, distant, smooth, and divided into numerous smaller ones; ascending and leafy towards the top of the tree, but naked at the bottom from the fallen leaves. Male catkins solitary, cylindrical, erect, more than an inch long, and two lines in diameter. Cones almost spherical, from two to three inches in diameter, solitary, erect, and produced near the top of the branches on stout foot-stalks. Scales broad, spreading, wedge-shaped, thick, leathery, closely imbricated, acute on the apex, very smooth, and becoming smaller towards the base of the cone, thicker externally towards the apex, woody, hard, and membranaceous on the margin. Seeds in twos, wedge-shaped, and brown, having at the top on one side a thin, transparent, quite entire, oblique, pale-coloured wing.

A large tree, attaining a height of from 120 to 150 feet, and about 24 feet in circumference, naked two-thirds of its entire height, and covered with a level, thick, lead-coloured bark, full of resinous matter. It produces an excellent hard brittle resin, like copal.

It is found in the northern parts of New Zealand, in forests close by the River Thames, towards the district of Mercury Inlet; also upon the north side of the Island of Wangaroa, and towards the western side of the Hokianga. The natives call it "Kauri," or "Kouri," and the settlers "Cowrie."

It is not hardy.

DAMMARA AUSTRALIS GLAUCA, *Low*, the Glaucous Cowrie Pine.

A singularly glaucous variety of the New Zealand Cowrie, introduced by Mr. Hugh Low, of the Clapton Nursery, in 1860.

No. 2. DAMMARA HYPOLEUCA, *Moore*, the White Under-leaved Dammara.

Syn. Dammara brevifolia, *Hort.*

Leaves oblong-lanceolate, obtuse at the ends, bright shining green above, and glaucous white beneath, and from one to two inches long, and about three-quarters of an inch broad.

A large tree, found at Port Molle, in New Caledonia.

Its somewhat compact habit of growth, and leaves of a bright green above and glaucous beneath, are well-marked differences in this species.

No. 3. DAMMARA MACROPHYLLA, *Lindley*, the Long-leaved Dammara.

Leaves very large, ovate, lanceolated and pointed; seven inches long, and two broad in the widest part. Cones ovate-obtuse, and very like those of the Cedar of Lebanon in size and form. Scales smooth, regularly inlaying, and much wider than long.

A large tree, growing 100 feet high, very much resembling the Amboyna Pine (Dammara Orientalis), but with larger cones and leaves. It was discovered by Mr. Moore, on the island of Vanicolla, one of the Queen Charlotte group in the South Seas.

It is very tender.

No. 4. DAMMARA MOORII, *Lindley*, Mr. Moore's Dammara.

Leaves very narrow-lanceolate, acuminate, slightly falcate, and slender, from five to six inches long, and less than half an inch wide. Cones unknown.

A very distinct species, of which little is known at present; found by Mr. Moore, seldom growing more than 40 feet high, and with an erect compact head, in New Caledonia.

It is very tender.

No. 5. DAMMARA OBTUSA, *Lindley*, the Obtuse-leaved Dammara.

Leaves very variable in shape, but mostly oblong, rounded at the ends, nearly four inches long, and one inch and a quarter broad, thick, leathery, of a dark glossy green, and without the least trace of a point. Cones oblong-cylindrical, with the ends rounded, three inches long, and one inch and three-quarters wide. Scales convex at the ends, about four times as broad as long, and quite different in that respect from the spreading points of the New Zealand kind.

A large tree, very similar in appearance to the New Zealand Cowrie, from which it is distinguished by the size and form of both its leaves and cones. It was found by Mr. Moore, on the Island of Aniteura, one of the New Hebrides. Timber valuable for ship-building.

It is very tender.

No. 6. DAMMARA ORIENTALIS, *Lambert*, the Amboyna Pine.

Syn. Dammara alba, *Rumph.*
„ „ loranthifolia, *Spach.*
„ Agathis loranthifolia, *Salisbury.*
„ „ Dammara, *Richard.*
„ Abies Sumatrana, *Desfont.*
„ „ Dammara, *Poiret.*
„ Pinus Dammara, *Lambert.*
„ „ Sumatrana, *Mirbel.*
„ Dammara Rumphii, *Presl.*

Leaves opposite, but sometimes alternate, ovate-oblong, attenuated at the base, obtuse or rounded on the point, quite entire, glabrous, of a thick leathery texture, and glaucous green, from two to four inches long, and nearly one inch and a half broad at the widest part, straight, rarely falcate, smooth and dull green on both faces, somewhat two-rowed on the young branchlets, and distant, those on the young plants almost lanceolate and sharp-pointed. Branches vertical, a little reflected, and ascending at the extremities, forming a small head on the adult trees. Branchlets and lateral branches in opposite pairs, and spreading. Male catkins about two inches long. Cones globular or turbinate, singly, on footstalks, rising from the axil of the leaves, near the extremities of the branches, from three to four inches long, and more than two inches broad. Scales adpressed, smooth, rounded at the top, thick, and very closely inlaying. Seed unattached, with an obtuse, one-sided wing, covering the rib of the scale.

A huge tree, growing upwards of 100 feet high, with a straight, smooth bark and trunk, from eight to ten feet in diameter, found on the very summit of the mountains of Amboyna and Ternate, and in many of the Molucca Islands, Java, and Borneo. Timber of little value; but it produces a fine transparent resin, sometimes hanging like icicles, and much esteemed by the natives for incense. Its Malay name is "Dammar."

It is very tender.

There is the following variety:—

DAMMARA ORIENTALIS ALBA, *Knight.*
Syn. Dammara alba, *Makoy.*
„ „ Orientalis pallens, *Carrière.*

This variety differs from the species in having much longer and more lanceolate-shaped leaves, with the edges more regularly rolled up on the under side, slightly undulated, whitish, and tapering much to the point, but abruptly and irregularly so to the base, and with the bark on the branches of a much whiter colour than the species.

No. 7. DAMMARA OVATA, *Moore,* the Ovate-leaved Dammara.

Leaves more or less opposite, subdistich, ovate-oblong or ovate-lanceolate, somewhat acute, leathery in texture, bright green, on rather short, twisted petioles, and from four and a half to five inches long, and from one to one inch and a half broad. Cones large, erect, oval-globose, obtuse at the ends, and five inches long and four inches broad. Scales broad, obovate, more or less horizontal, somewhat thickened at the top, and rounded and entire on the edges, and one inch and a half broad.

A large tree, found in New Caledonia, with subverticillate and somewhat horizontal, terete branches, and a stem covered with an ashy-gray bark, copiously producing a white resinous matter.

No. 8. DAMMARA ROBUSTA, *Moore*, the Robust New Holland Dammara.

Syn. Dammara Brownii, *Hort.*
„ „ Bidwillii, *Hort.*

Leaves somewhat opposite, subdistich, oval-lanceolate, rather blunt at the points, on very short, twisted foot-stalks, bright glossy green, and from three and a half to four inches long, and from one to one inch and a half broad. Cones oval, with the ends rounded and somewhat depressed, and from three and a half to four inches long, and from two to three inches wide. Scales broad, obovate-rhomboid, thickened at the apex, very obtuse, or somewhat truncate, at the ends, and one inch and a quarter long, and nearly one inch and a half wide. Seeds half an inch long and a quarter of an inch wide, with an ample wing three-quarters of an inch long.

A fine tree, varying in height from 35 to 70 feet, with the branches in whorls of from five to ten in number, found on the north-east part of New Holland, at Dusky Bay.

No. 9. DAMMARA VITIENSIS, *Seemann*, the Feejee Island Dammara.

Syn. Dammara longifolia, *Lindley.*

Leaves more or less opposite, subdistich, oblong or oval-lanceolate, rounded at the base, on short twisted foot-stalks, bright green above, somewhat glaucous beneath, slightly revolute on the margins, and from two and a half to five inches long, and from one-half to one inch and three-quarters broad. Cones ovate-globose, rounded at the ends, and from three to three inches and three-quarters long, and three inches wide. Scales oval, thickened at the apex, and either rounded or somewhat acute at the ends, and one inch broad.

A splendid tree, from 40 to 100 feet high, with large and very variable leaves, found on the mountains of Nisarim, and other parts of the Viti or Feejee Islands.

Gen. DISELMA. *J. Hooker.*

Flowers, diœcious, or male and female on separate plants; the male catkins very small, oval, solitary, and terminal; the female ones small, sub-globose, and terminal.

Cones, very small, globular, and composed of four scales; the two outer ones being ovate, acute-pointed, short, and sterile; the two inner ones oval, rounded at the ends, fertile, and nearly double the size of the outer ones.

Seeds, in twos or threes, under each of the fertile scales, almost round, and amply three-winged.

Leaves, small, scale-formed, ovate-rhomboid, regularly imbricated, in four rows, convex and keeled on the back, concave on the upper side, and with narrow, membranous margins.

A very branching shrub, with the female plants prostrate and the male ones erect, found on the western mountains of Tasmania.

DISELMA ARCHERI, *J. Hooker,* Dr. Archer's Diselma.

Syn. Microcachrys tetragona, *Archer,* not *Hooker.*

Leaves small, scale-formed, ovate-rhomboid, obtuse, regularly and closely imbricated in four rows, convex and keeled on the back, concave on the upper surface, and with narrow, membranous margins. Branchlets numerous, slender, and tetragonal. Flowers diœcious. Male catkins very small, oval, solitary, and terminal; female ones small, sub-globose, and terminal. Cones very small, globular, and composed of four scales; the outer pair being ovate, acute-pointed, short, and sterile; and the two inner ones oval, rounded at the points, fertile, and nearly double the size of the outer ones. Seeds in twos or threes, under each of the fertile scales, almost round, and broadly three-winged.

A very branching shrub, resembling the Microcachrys tetragona, with the female plants prostrate, and the male ones erect, and from eight to ten feet high, found on the western mountains of Tasmania, at an elevation of from 4000 to 5000 feet.

Gen. FITZ-ROYA. *Hooker.*

Flowers, diœcious, or male and female on separate plants.

Cones, star-like bodies, having their axis terminating in three soft club-like glands or abortive scales, and consisting of nine scales, three in each whorl.

Scales, nine in number, in whorls of three, the lower three alternate with the upper leaves, the intermediate three only are fertile, the upper three are alternating with the fertile ones flattened, and standing with their edges bent outwards.

Seeds, three under each fertile scale, surrounded by a broad wing, ending in a narrow neck, the centre seed attached to the scale, the other two to the axil, but sometimes two seeds are on the scale, and three on the axil. (Hooker.)

Leaves, in whorls of three, but sometimes in twos or fours, ovate-oblong, flat, without any foot-stalks, and more or less spreading, or loosely imbricated.

Named, by Dr. Hooker, in compliment to Capt. Fitz-Roy, who first discovered the tree.

A large evergreen tree, found on the Patagonian mountains.

FITZ-ROYA PATAGONICA, *Hooker,* the Patagonian Fitz-Roya.

Leaves in whorls of three, but sometimes in twos or fours; linear, or ovate-oblong, and mostly blunt-pointed, decussste, flat, without any foot-stalks, and spreading, of a deep green above, and with two glaucous lines on the under-side, from four to six lines long on the young plants, but much smaller and closer on the adult ones, from one to one line and a half long, closely imbricated, almost oval, and with hardly any traces of the glaucous bands on the under side. Branches irregularly placed along the stem, spreading, rather slender, and bent downwards towards the extremities; branchlets short, numerous, rather clustered, and thickly clothed with foliage. Cones small, solitary, and terminal, star-like bodies, having their axes terminating in three soft club-like glands or abortive scales.

Sir William Hooker describes the fruit as consisting of nine scales, three in each whorl, the lower three which alternate with the uppermost leaves are barren, the intermediate three only are fertile, the three uppermost alternate with the fertile ones and are flattened, but stand with their edges bent outwards, each fertile scale has three erect seeds, surrounded by a broad wing, and ending in a narrow neck; the central seed is attached to the scale, the other two to the axil, but sometimes two seeds are on the scale, and three on the axil.

A large evergreen tree, growing 100 feet high, with a thick, spongy bark, and slender, spreading branches, bending downwards at the ends in a curved manner. The wood is red, and bears considerable resemblance to that of the Cedar of Lebanon.

It is found on the Patagonian mountains, growing in rocky places on the Pacific side, to a large tree, with a stem eight feet in diameter, but diminishing with elevation until it dwindles down to a small bush, only a few inches high on the borders of perpetual congelation.

It will stand our ordinary winters in favourable situations, but is much injured in severe ones.

Gen. FRENELA. *Mirbel.*

Flowers, monœcious, or male and female on the same plant, but separate.

Cones, globular, or conical, and consisting of six, or rarely eight valvated scales, the alternate ones being much the smallest and shortest.

Seeds, numerous, more or less angular, and laterally winged on both sides.

Leaves, mostly ternate, scale-formed, and decurrent.

Seed-leaves, in threes.

All trees or shrubs, natives of New Holland, and not hardy.

Named after M. Frenel, by Professor Mirbel of Paris.

No. 1. **Frenela arenosa**, *Endlicher*, the Sand Frenela.
Syn. Callitris arenosa, *Sweet.*

An evergreen bush, of which little is known, found growing in sandy places in New Holland.

No. 2. **Frenela Australis**, *Hooker*, the Australian Frenela.
Syn. Frenela Ventenati, *Mirbel.*
„ „ triquetra, *Spach.*
„ „ rhomboidea, *Endlicher.*
„ Callitris rhomboidea, *Brown.*
„ „ cupressiformis, *Ventenat.*
„ „ Australis, *Hooker.*
„ „ articulata, *Pinet Woburn.*
„ Thuja Australis, *Poiret.*
„ „ inæqualis, *Desfontain.*
„ Juniperus Cunninghamii, *Hort.*

An evergreen tree, with scale-formed leaves, decurrent at the base, and placed in threes at the bottom of each joint, but sometimes scattered, extended, spreading, and of a very glaucous white colour. Branches and branchlets slightly angular and slender. Cones globular, mostly in clusters, but sometimes solitary, on short foot-stalks, and about the size of a common nut. Valves thick, rounded at the ends, oval, woody, smooth, or longitudinally wrinkled, and with the central column short, and three-edged. Seeds oval, osseous, and furnished with a narrow membranaceous wing on the sides.

A tree, growing from 60 to 70 feet high, found on the east coast of New Holland, and Van Diemen's Land, where it is called by the settlers, the Oyster Bay Pine.

No. 3. **Frenela calcarata**, *Cunningham*, the Spurred Frenela.
Syn. Callitris calcarata, *R. Brown.*
„ Frenela ericoides, *Endlicher.*
„ Juniperus ericoides, *Noisette.*

An evergreen tree, of which little is known, found in the interior of the eastern part of New Holland.

No. 4. Frenela canescens, *Parlatore*, the Hoary Frenela.

Leaves in whorls of three, adnate, quite free at the points, hoary and glittering, and with those on the branches somewhat acute, and those on the lesser branchlets obtuse. Cones globose, solitary, somewhat erect, grayish-brown, half an inch long, and the same broad, and composed of six valvate scales placed on a somewhat short, three-sided column; the three larger ones are oblong-obtuse, and the other three short, oval-lanceolate, and somewhat obtuse; and all convex on the back, smooth or slightly wrinkled and mutic; seeds small and blackish, with broad and somewhat orbicular wings, deeply cordate at the base.

A small tree, with terete branches, and crowded, slender, short, subterete branchlets, which are erect and hoary; found in the south-western part of New Holland, and at the Swan River.

No. 5. Frenela columellaris, *Mueller*, the Pillar-fashioned Frenela.

Leaves in threes, adnate, free at the points and triangular. Cones small, globose, solitary, or in twos and threes, and composed of six valvate scales, the three shorter ones, linear-lanceolate, seeds almost all two-winged.

A kind of which little is known, found along the banks of the tributary streams of the Richmond River in Australia.

No. 6. Frenela Drummondii, *Parlatore*, Mr. Drummond's Frenela.

Leaves in threes, adnate, somewhat obtuse and free at the points, convex and keeled on the back, and quite smooth, and green on the upper surface. Cones, somewhat globose, mostly solitary, shining, chestnut-brown, and half an inch long, and rather more broad, and consisting of six valvate scales, the three larger ones being oblong-obtuse, and the three lesser ones somewhat acute, and all quite smooth on the back.

A large shrub, 10 feet high, with terete branches and thickened, erect, alternate, three-edged branchlets, found in the south-western part of New Holland, and at the Swan River colony.

No. 7. FRENELA ENDLICHERI, *Parlatore,* Professor Endlicher's Frenela.

Syn. Frenela fruticosa, *Endlicher.*
„ „ Australis, *Endlicher.*
„ Callatris fruticosa, *Brown.*
„ Cupressus Australis, *Persoon.*

Leaves in threes, adnate, convex on the back, free and somewhat obtuse at the points. Cones globose or oval obtuse, three-quarters of an inch long, and rather more than half an inch broad.

An evergreen bush, with loose, subterete branches, crowded with somewhat slender three-edged branchlets, and with ovate, dry, woody, six-valved cones, smooth internally, and with a very short, depressed, three-sided, central column; and seeds with narrow, lateral wings, rounded on the edges.

It is found in the interior of the eastern part of New Holland, and about Port Jackson.

No. 8. FRENELA FOTHERGILLI, *Endlicher,* Fothergill's Frenela.

Syn. Callitris Fothergilli, *Loudon.*
„ Cupressus Fothergilli, *Pinet-Woburn.*

A large pyramidal bush, or small tree, with erect branches, and numerous dense branchlets. Cones solitary, conical, and quite woody. Valves unequal, and rounded at the ends.

It is nearly hardy, and comes from the mountains of Tasmania.

No. 9. FRENELA GULIELMI, *Parlatore,* Prince Gulielmus's Frenela.

Leaves in threes, adnate, convex on the back, short, somewhat blunt-pointed and free at the apex. Branches terete. Branchlets loosely erect, somewhat forked, slender, and three-sided. Cones solitary, globose, half an inch long, and rather broader, and composed of six valves, the three larger ones being oval-oblong and somewhat blunt-pointed, the three lesser ones short, narrow, lanceolate, and acute, and all smooth, shining, and convex on the back.

A bush, or small tree, found in the southern part of New Holland, at Salt Lake, near Tungetta.

No. 10. Frenela Gunnii, *Endlicher*, Gunn's Frenela.

Syn. Callitris Gunnii, *Hooker.*
„ „ oblonga, *Richard.*
„ „ macrostachya, *Hort.*
„ „ glauca, *R. Brown.*
„ Frenela Australis, *Brown* and *Mirbel.*
„ „ macrostachya, *Knight.*
„ „ variabilis, *Carrière.*
„ „ glauca, *Mirbel.*
„ Cupressus macrostachya, *Hort.*

Leaves small, scale-formed, sharp-pointed, closely adpressed at the base of each joint. Branches ascending. Branchlets ascending, angular, smooth, glaucous, and slightly jointed. Cones somewhat conical, very rarely elliptic, solitary, or in pairs; but sometimes in clusters, sessile, or placed on very short foot-stalks, and both growing on the branches and principal stems. Valves mostly in six, but sometimes seven and eight in number, thick, rounded on the ends, and unequal sized, the alternate ones being much shorter and smaller than the others, convex, much rounded in the middle, and shining brown externally. Seeds broadly winged, and rather angular.

An evergreen shrub, from five to nine feet high, with a pyramidal head, found in Van Diemen's Land, where the colonists call it "The Native Cypress."

It is tender.

No. 11. FRENELA HUGELII, *Carrière,* Hugel's Frenela.

Syn. Callitris Hugelii, *Knight.*

Leaves scale-formed, very short, closely adpressed, much longer and more pointed on the branches than on the smaller branchlets. Branches somewhat ascending; lateral ones rising up at the sides, and forming a slightly spreading head. Branchlets spreading, obtusely angular, and very short jointed. Cones solitary or in clusters, somewhat globular, depressed, and frequently much broader than long. Valves unequal, the three alternate ones being much shorter and smaller than the others, wrinkled externally, and shining.

A pyramidal tree, with ascending branches, found on the south-west coast of New Holland and Swan River.

No. 12. FRENELA MACLEYANA, *Parlatore,* Mr. Macley's Frenela.

Syn. Leichardtia Macleyana, *Shepherd.*
„ Octoclinis Macleyana, *Mueller.*
„ „ Backhousii, *Hill.*

The primordial leaves on young plants are spreading, linear or lanceolate, rather thickly placed, and sometimes reflected; but soon afterwards are succeeded by acicular or scale-formed ones, regularly placed in threes or fours, and finally, when the plants become fully matured, they are entirely scale-formed, ternate, very small, and closely placed. Branches scattered along the main stem, horizontal, short, and not very dense; the lateral ones and smaller spray are more or less angular or triangular, jointed, glaucous, and with the joints tolerably distant. Cones oval or somewhat conical, and composed of eight valvate scales. Scales or valves thick, rounded and convex on the outside, glossy brown, pointless, smooth, and swelling at the apex, which is slightly reflected.

A handsome, erect, pyramidal-shaped tree, approaching in appearance when old to some of the Australian Araucarias, but with much shorter and slenderer branches.

It is found in New South Wales, Brisbane, and Queensland, where it attains a height of from 60 to 70 feet.

No. 13. FRENELA MOORII, *Parlatore*, Mr. Moore's Frenela.

Syn. Frenela verrucosa lævis, *Moore*.

Leaves in whorls of three, adnate, and quite free at the apex; those on the branches are lanceolate, acute, and somewhat spreading; those on the branchlets are closely adpressed and blunt-pointed. Cones roundly-ovate, erect, and composed of six valves, the three larger ones being ovate-oval, and somewhat blunt-pointed, and the three lesser ones short, oblong-linear, and rather blunt, and all of them slightly wrinkled or netted on the back, and placed on a short, acute column. Seeds small and oblong-linear.

A tree from 60 to 90 feet high, with terete branches, crowded with slender, three-sided, glaucous branchlets. It is found in the maritime parts of New Holland, near Moreton Bay, and along the Clarence, Richmond, and Darling Rivers.

No. 14. FRENELA MUELLERI, *Parlatore*, Mr. Mueller's Frenela.

Leaves three in a whorl, scale-formed, adnate, obtuse at the points, and closely pressed, with only the apex free. Cones solitary, but often close together, sub-globose, one inch long, and composed of six valves, which are smooth, or slightly wrinkled on the back; the three larger ones are oblong, and rather blunt-pointed, and the three lesser ones mostly short, narrow, linear-lanceolate, and acute. Seeds oblong, two or three winged, blackish, and two lines long.

A handsome tree, from 20 to 30 feet high, with a dense head, terete branches, and erect, thickish, three-sided branchlets; found in the eastern part of New Holland, about Port Jackson, Sidney, and South Head.

No. 15. FRENELA PARLATOREI, *Mueller*, Professor Parlatore's Frenela.

Leaves in threes, adnate, convex, and keeled on the back, with the points free and acuminate. Cones large, ovoid, nodding, and more than an inch long, and composed of six valves, the three larger being ovate-lanceolate, and the three lesser ones narrow, short, and lanceolate, and all keeled on the back and obtuse at the ends.

A tree 60 feet high, with the branchlets frequently jointed, found in the eastern part of New Holland, on the Darling Range, and Queensland.

No. 16. FRENELA PROPINQUA, *Cunningham*, the Related Frenela.

Syn. Callitris propinqua, *R. Brown.*

An evergreen pyramidal bush, of which little is known, found in the eastern part of New Holland.

No. 17. FRENELA PYRAMIDALIS, *Carrière*, the Pyramidal Frenela.

Syn. Callitris pyramidalis, *Sweet.*

Leaves very small, scale-formed, very close, obtuse, and very rarely pointed. Branches ascending and dense; branchlets very numerous, small, and pressed towards the ends of the branches, of a grayish colour, angular, and loose. Fruit unknown.

A pyramidal bush or small tree, found in New Holland.

No. 18. FRENELA RIGIDA, *Endlicher*, the Rigid Frenela.

Syn. Juniperus rigida, *Noisette.*

A small bush, of which little is known, found in New Holland.

No. 19. FRENELA ROBUSTA, *Cunningham*, the Robust Frenela.

Syn. Callitris robusta, *R. Brown.*
„ „ Preissii, *Miquel.*
„ „ glauca, *R. Brown.*
„ Frenela glauca, *Mirbel.*
„ „ crassivalvis, *Miquel.*

A large pyramidal tree, from 20 to 30 feet high, with very small, scale-formed leaves, slightly spreading at the points, and mucronate. Branches ascending. Branchlets slightly angular, or three-edged. Cones spheroidal, much depressed, and frequently broader than long. Valves warted on the interior, with the central column short and three-edged. Seeds furnished with narrow lateral wings.

It is found on the south-west coast of New Holland, and at the Swan River, where the natives call it "Marro."

No. 20. FRENELA ROEI, *Endlicher*, Roe's Frenela.

An evergreen bush, with globular cones composed of six valves, smooth on the interior, with a short, depressed, three-sided, central column, and acute-pointed valves, found on the south-west coast of New Holland.

No. 21. FRENELA SUBCORDATA, *Parlatore*, the Subcordate-coned Frenela.

Leaves three in a whorl, adnate, convex, and keeled on the back, with the points free and somewhat acute. Branches terete. Branchlets flexuose, alternate, and three-sided. Cones subcordate-globose, half an inch long, and about the same broad, and composed of six valves.

It is found in the south-west part of New Holland, at King George's Sound.

No. 22. FRENELA SUBUMBELLATA, *Parlatore*, the Subumbellata-branched Frenela.

Leaves in fours, adnate, and strictly keeled on the back, and with the points free and obtuse. Branchlets crowded, erect, alternate, subumbellate, and triangular.

A tree, found in New Caledonia, of which little is known.

No. 23. FRENELA SULCATA, *Parlatore*, the Sulcate-coned Frenela.

Leaves three in a whorl, adnate, convex, and keeled on the back, free at the points, and somewhat obtuse. Branchlets somewhat thickened, erect, alternate, and three-sided. Cones globose, flattened, half an inch long, and about one-third of an inch wide, and composed of six erect, somewhat three-sided, pyramidal valves, the three larger of which are somewhat obtuse-pointed, and the three lesser ones somewhat acute, and all deeply furrowed on the back. Seeds small, ovate, and three-sided.

It is found in New Caledonia.

No. 24. FRENELA TUBERCULATA, *Mirbel*, the Tuberculated Frenela.

Syn. Callitris tuberculata, *R. Brown.*

An evergreen bush, from the southern part of New Holland, of which little is known.

No. 25. FRENELA VERRUCOSA, *Cunningham*, the Warted Frenela.

Syn. Callitris verrucosa, *R. Brown.*

An evergreen pyramidal tree, with small, scale-formed leaves, frequently spreading at the points. Branches spreading or ascending, very compact, and cylindrical. Cones globular, depressed, and sometimes broader than long. Valves externally covered by large, irregular tubercles, and internally warted, central column oblong, and three-sided. Seeds broadly winged.

It is found in the interior, on the eastern part of New Holland, along the Murray River, and in the colony of Victoria, and is called the Murray Pine by the settlers, and the Marunny by the Indians.

Gen. GLYPTOSTROBUS. *Endlicher.* The Embossed Cypress.

Flowers, monœcious, or male and female on the same plant, but on separate parts, and terminal.

Cones, egg-shaped, or oblong, and composed of several unequal-sized scales, all rising from the same point at the base, and leathery.

Seeds, two under each scale.

Leaves, scattered and trigonal.

Name, derived from "Glypho," embossed, and "strobus," a cone; scales of the cone embossed on the face.

A small tree, native of China, where it is called Water Pine.

GLYPTOSTROBUS HETEROPHYLLUS, *Endlicher,* the Chinese Water Pine.

Syn. Taxodium nuciferum, *Brongniart.*
„ „ Japonicum, *Denhardt.*
„ „ „ heterophyllum, *Brongniart.*
„ Schubertia Japonica, *Spach.*
„ „ nucifera, *Denhardt.*
„ Thuja lineata, *Poiret.*
„ „ „ lavandulæfolia, *Poiret.*
„ „ pensilis, *Staunton,*
„ Cupressus nucifera, *Hort.*
„ „ Sinensis, *Hort.*
„ Juniperus aquatica, *Roxburgh.*

Leaves of various shapes, alternate, some scale-formed, small, ovate, acute or obtuse pointed, sometimes much longer, closely pressed and decurrent along the shorts, sometimes two-rowed, regularly tortuose, and almost awl-shaped, from three to eight lines long, slightly curved, blunt or somewhat acute at the ends, and of a glaucous-gray colour, the lower ones near the base of the shoots frequently very short, scale-formed, somewhat triangular, imbricated, and compressed, but increasing in size and length towards the points of the shoots, and spreading out into rather long, awl-shaped, recurved leaves. Branches rising upwards and spreading out at the summits. Branchlets alternate, stout, and rendered angular by the decurrent base of the the leaves; the cone-bearing ones of various lengths, and covered with very small scaled-formed leaves, particularly at the base of the cones. Cones terminal, egg-shaped, or oblong-cylindrical, tapering to both ends, blunt at the apex, and composed of several unequal-sized scales, the smaller ones being towards the base, and all rising from the same point at the base upwards, imbricated, and furnished with a stout, short-curved, blunt point on the back near the end of the scale, projecting outwards.

A small tree, or large bush, growing from eight to ten feet high, with a straight stem, and fastigiate head, a little extended at the top, and nearly evergreen.

It is found in many parts of China, particularly in the provinces of Shan-Tung and Kiang-nan, and is planted along the margins of rice fields about Canton.

The Chinese name for this tree is "Then-tsong" (Water Pine), on account of its growing in places frequently inundated by water, and along the margins of rice fields.

It is tolerably hardy in England.

Gen. JUNIPERUS.* *Linnæus.* The Juniper.

Flowers, diœcious, or male and female on different plants. The males, axillary or terminal catkins; the female ones small axillary bud-like bodies, bracteated at the base.

---

* Some writers derive the word *Juniperus* from "Juniores pariens," the young and old leaves and berries being on the plant at the same time; but the plant having been used for purposes of abortion, obviously gives its true derivation from "Juvenus" and "Pario."

Fruit, a globular kind of berry, composed of a fleshy or fibrous juicy substance, covered with a glossy skin, more or less furnished externally with minute scales, and sometimes angular and naked at the apex.

Seeds, from one to five, but mostly three in each fruit, obscurely three-cornered, and covered with a hard bony covering, having gland-bearing pits towards the base.

Leaves, simple, opposite or ternate, lanceolate or scale-formed, and either in extended whorls, or closely imbricated in four rows.

Seed-leaves, in twos.

All evergreen shrubs or small trees; found in the temperate and frigid regions of Europe, Asia, Africa, and America.

The trees and shrubs belonging to this genus generally produce the male and female flowers on separate plants, with the leaves mostly sharp-pointed, stiff, and usually in whorls of three; but sometimes they are mere scales, closely imbricated in four rows (as in the Cypress), or occasionally both kinds occur on the same plant at different stages of its growth. The male strobili are small, ovate bodies, and either placed at the ends of the branchlets or in the axil of the leaves, and with from four to eight one-celled anthers at the back of each scale. The fertile catkins consist of three fleshy scales, at first nearly concealed by imbricated bracts, from which they gradually rise, grow more succulent, and finally become consolidated into a small, round, fibrous, spongy berry, enclosing from one to three bony seeds, but mostly three, which are convex on one side, and angular on the other. The berries (Galbules), when ripe, are for the most part either of a deep purple, black, or reddish brown, and when crushed, emit a strong resinous smell.

Section I. OXYCEDRUS, THE TRUE JUNIPERS.

Leaves, in whorls of three, spreading in the adult plants, jointed at the base, and glandless on the back.

Fruit, globular and smooth.

No. 1. JUNIPERUS CANADENSIS, *Loddiges*, the Canadian Juniper.

Syn. J. communis depressa, *Pursh.*
„ „ nana montana, *Endlicher.*
„ „ depressa, *Booth.*
„ „ dealbata, *Douglas*, not *Loudon.*
„ „ Davurica, *Hort.*

Leaves lanceolate, narrow, three in a whorl, incurved, spreading, tapering regularly from the base to the point, very sharp-pointed and stiff; pale green below, and channelled with a white band on the upper surface. Branches, rather slender, spreading and elevated; lateral ones rather short, and not very thickly clothed with very pungent leaves. Berries ovate-globular, smooth, shining, and nearly black when ripe.

This species grows from three to five feet high, with an elevated spreading head, rather open in appearance. It is found growing in the northern parts of North America, in Labrador, Newfoundland, Hudson's Bay, the rocky districts of Newbury and Main, in Greenland, and on the Island of Sitcha.

It is frequently confounded with the dwarf Juniper of Europe (J. nana), but is easily distinguished from it by its much narrower, sharper-pointed, and paler foliage, and in its more elevated branches, growing from three to five feet high, while those of the dwarf juniper lie flat, or creep along the ground.

No. 2. JUNIPERUS CEDRUS, *Webb*, the Canary Island Juniper.

Syn. Juniperus, Webbii, *Carrière.*
„ „ Canariensis, *Knight.*

Leaves in whorls of three, straight, rigid, erectly-spreading, linear-lanceolate, blunt-pointed, ending in a short prickle, very numerous and closely placed, especially upon the fertile branchlets; the lower leaves are generally ovate-lanceolate, the upper ones linear and sharp-pointed, slightly keeled, mostly straight, seldom concave, and frequently very glaucous on the upper side, and from three to five lines and a half long, and three-quarters of a line broad. Branches horizontal, bent downwards at the points; branchlets numerous, short, angular, thickly clothed with leaves, and of a glaucous green colour. Berries large, globular, nearly smooth, of a deep yellowish-brown colour, covered all over with a glaucous bloom, and with a few tubercles slightly jutting out all round, and from four to five lines long and the same broad.

This kind, according to Mr. Webb, forms a large tree in the warm valleys on the Island of Teneriffe and Canary Islands, with a stem four or five feet in girth; it, however, is subject to great variation in size and appearance, being found at elevations varying from 1000 to 5000 feet on those islands; at the latter of which elevations it becomes a bush, with its leaves very much reduced in size, and partially imbricated; while in the lower and more sheltered situations it becomes a large tree, with long, slender, drooping branches and branchlets, little divided, but furnished with spreading distant leaves in threes; the fruit-bearing ones being covered with small scale-like leaves only one line long. It is found plentiful on the Island of Teneriffe and the Canary Islands, where the inhabitants call it "Cedro," the French "Cade," and the Spanish "Enebro."

There is the following variety:—

JUNIPERUS CEDRUS BREVIFOLIA, *Gordon*, the Azores Juniper.

Syn. Juniperus Oxycedrus brevifolia, *Hochts.*
„ „ rufescens brevifolia, *Endlicher.*
„ „ brevifolia, *Parlatore.*

Leaves in threes, somewhat loosely and partially imbricated, linear-falcate, or somewhat oval, more or less rounded and slightly pungent at the apex, very glaucous, and from two and a half to four and a half lines long, and one line broad. Branches very numerous, terete and spreading; branchlets short, spreading and angularly three-sided. Berries globular, solitary, reddish-brown, and from two and a half to three lines long, and the same broad.

A large bush, from eight to ten feet high, found in the Azores and adjoining islands, and tender in England.

This variety differs from the species, in having much shorter and more numerous branches and compact branchlets; in the leaves being more dense, shorter, partially imbricated, and very glaucous; and in the berries being much smaller, scaly on the top, and of a reddish-brown colour.

No. 3. JUNIPERUS COMMUNIS, *Linnæus,* the Common Juniper.

Syn. Juniperus minor, *Fuchs.*
" " vulgaris, *Bauhin.*
" " " fruticosa, *Duhamel.*
" " communis vulgaris, *Loudon.*

Leaves spreading, in whorls of three, narrow, sharp-pointed, awl-shaped and stiff; green on the under and gray on the upper surface, and half an inch or more long. Berries small, roundish, marked on the top with three radiating grooves; when young, bright green, but when ripe of a dark purple or blackish blue, covered with a glaucous bloom, and continuing for two years on the bush; they are stalkless, and grow from the axil of the leaves; branches spreading and inclining equally on all sides; bark reddish brown.

This Juniper grows in favourable situations from twelve to eighteen feet high, and is common in all the northern parts of Europe, both on hills and valleys, in open sandy plains, or in moist and close woods; on the sides of hills it grows tall, but on the tops of rocky mountains it is only a dwarf-trailing shrub. In England it is chiefly found on open downs, in a chalky or sandy soil. It occurs very generally on the Alps, from east to west, and from the foot to a height of 5000 feet; also on the Apennines at the same elevation as the Alps, and occurs in the whole of the north of Europe, as far as Lapland, and is found, according to Mr. Bentham, on the Pyrenees. Those plants referred to this species by writers as being found in North

America and Northern India, belong to very different species. The following are its varieties, viz.:

JUNIPERUS COMMUNIS SUECICA, *Loudon,* Swedish Juniper.

Syn. Juniperus vulgaris arborea, *Bauhin.*
„ „ Suecica, *Miller.*
„ „ fastigiata, *Knight.*
„ „ communis fastigiata, *Loudon.*

Leaves spreading, shorter than those of the species, more distant and sharper-pointed. Branches ascending, compressed, and forming a sharp-pointed cone, with a very distinct upright appearance. Berries larger and longer than those of the common Juniper, of a dark purple colour, and smooth.

It is a native of Sweden, Denmark, Norway, and Russia, and attains to a greater size than the common Juniper in those countries, frequently attaining a height of 20 feet.

In the forest of Fontainebleau, in France, this variety has attained the height of 50 feet, and produced most excellent timber.

JUNIPERUS COMMUNIS HIBERNICA, *Loddiges,* the Irish Juniper.

Syn. Juniperus stricta, *Hort.*
„ „ pyramidalis, *Hort.*
„ „ Hibernica, *Loddiges.*
„ „ communis stricta, *Carrière.*

A pyramidal variety, with erect branches and rather spreading, short, angular branchlets, having its leaves shorter and less pointed than those of the species, and with the branches less compressed than those of the Swedish Juniper (J. c. Suecica).

It is a handsome variety, found on the mountains in Ireland.

JUNIPERUS COMMUNIS CRACOVIA, *Loddiges,* the Cracow Juniper.

This variety forms a robust, erect, loose bush, intermediate between the common and Swedish Junipers; found at Cracow, in Poland.

JUNIPERUS COMMUNIS COMPRESSA, *Carrière.*

Syn. Juniperus Hibernica compressa, *Hort.*
„ „ Hispanica, *Presl,* not *Miller.*
„ „ compressa, *Rinz.*
„ „ communis Hispanica, *Lawson.*
„ „ Suecica pyramidalis, *Manetti.*

This variety is easily distinguished from the Irish Juniper by its branches being very much shorter, slenderer, and all erect, and forming in consequence a very straight and compact pyramid, with the leaves closer together along the branchlets, much shorter, less spreading, and with the bark of the branches much darker in colour.

A small, compact variety, with a dense, pyramidal-shaped head, found indigenous on the Pyrenees and Apennines, at an elevation of 5000 feet.

No. 4. JUNIPERUS CONFERTA, *Parlatore,* the Crowded-leaved Juniper.

Syn. Juniperus littoralis, *Maximo.*

Leaves thickly placed in threes, linear, somewhat three-sided, rigid, openly imbricated, sharp-pointed, and half an inch long, and half a line wide; with the upper side channelled and longitudinally marked with white, and the under one convex and keeled. Berries exactly globose, quite smooth, and of a tawny-brown colour, thickly covered with a violet glaucous bloom, and rather more than one-third of an inch long and the same broad.

It is found at Hakodadi, in Japan, and resembles Juniperus rigida; but differs from it in having the leaves more crowded, grosser and triangular, and the berries much larger.

No. 5. JUNIPERUS DRUPACEA, *Labill,* the Plum-fruited Juniper.

Syn. Arceuthos drupacea, *Antoine.*
„ Juniperus latifolia arborea, *Tournefort.*
„ „ major, *Bellonius.*

Leaves, in whorls of three, thickly set all round the branches, rigid, linear-lanceolate, sharp-pointed, spreading, and without any foot-stalks, but slightly decurrent; three-quarters of an inch long, and more than one tenth of an inch wide near the base; but the lower leaves on the branches are shorter, broader, more oval or elliptic, and get regularly narrower, and more linear towards the summit or ends of the shoots, and terminating in a very sharp hard point, slightly concave on the upper side, with a small mid-rib, on each side of which is a white glaucous line, convex on the under side, with a projecting nerve along the back, and of a light green colour. Stem erect, much branching, branches short, spreading, slightly angular, inclining to cylindrical; smaller ones numerous, three-sided, with the ends rather straight; fruit-bearing ones very short, and thickly covered with short, oval, sharp-pointed leaves pointing upwards. Berries solitary, standing in the axil of the leaves, globular or bluntly-ovate; one inch long, and nearly the same broad, with from six to nine fleshy scales, disposed vertically in threes, alternately one above another, and blended or run together on the surface, but projecting and very distinct, being divided into distinct spaces of an angular form, deeply divided at the apex, and of a dark purple colour, covered all over with a glaucous violet-bloom, or powder, each fruit containing a single large, egg-shaped, hard, bony nut, parted in the interior into three divisions, each containing a single seed, but frequently one of them is abortive; the seeds require two or three years to vegetate.

A large bush or small tree, growing 30 feet high, in the northern parts of Syria, on Mount Cassio and Asia Minor, and called Habhal.

It is quite hardy, and the finest of all the Junipers.

No. 6. JUNIPERUS HEMISPHÆRICA, *Presl*, the Globular Juniper.
Syn. J. echinoformis, *Rinz.*
„ „ vulgaris fruticosa, *Cupan.*
„ „ Oxycedrus echinoformis, *Van Houtte.*
„ „ nana hemisphærica, *Carrière.*
„ „ communis hemisphærica, *Parlatore.*

Leaves spreading, very dense, sharp-pointed, three in a whorl, whitish above, pale green below, and like those of the common Juniper (J. communis), but much smaller; branches very short, numerous, dense, and compact, forming a small globular-headed bush, not more than one or two feet high. Berries globular, bright red, and shining.

It is found on the upper barren regions of Mount Etna, a low spreading but dense bush, at an elevation of from 5000 to 7000 feet. Professor Tenore says it is also found on the mountains of Calabria.

This very dwarf and singular little Juniper is now frequently to be found in English collections of Conifers, under the name of J. echinoformis, or the Hedgehog Juniper, a very appropriate name; for young healthy plants, at a short distance, look very like a green Hedgehog.

No. 7. JUNIPERUS MACROCARPA, *Sibthorp,* the large Purple-fruited Juniper.

Syn. J. maximus, *Lobel.*
„ „ Lobelii, *Gussone.*
„ „ oblongata, *Gussone.*
„ „ Biassolettii, *Link.*
„ „ major, bacca-cœrulea, *Tournefort.*
„ „ neaboriensis, *Lawson.*
„ „ elliptica, *Van Houtte.*
„ „ umbilicata, *Grenier.*
„ „ Wilkommii, *Antoine.*
„ „ sphærocarpa, *Antoine.*
„ „ Attica, *Heldreich.*
„ „ communis macrocarpa, *Spach.*

Leaves spreading, lanceolate, and in whorls of three, broader than those of J. Oxycedrus, and sharp-pointed, keeled on the under side, two furrowed, and glaucous gray above; branchlets angular and slender, with the ends rather pendent. Berries very large, obovate, or elliptic, smooth, shining, and of a deep purplish black colour, when ripe, covered with a glaucous violet bloom, like a small Plum.

A large bush, growing from ten to fifteen feet, on all the rocks and sandy coasts of the Mediterranean, in Austria, Sicily, Greece, and near Cadiz, in Spain, and on the Barbary Coasts, and Algiers.

It is quite hardy, and one of the finest.

No. 8. JUNIPERUS NANA, *Willd.*, the Dwarf Juniper.

Syn. Juniperus Alpina, *Clusius.*
„ „ minor Montana, *Bauhin.*
„ „ Alpina Suecica, *Plukenet.*
„ „ communis Montana, *Aiton.*
„ „ „ nana, *Loudon.*
„ „ „ Alpina, *Wahlenb.*
„ „ Sibirica, *Burgsdorff.*
„ „ nana Alpina, *Endlicher.*
„ „ saxatilis, *Pallas.*
„ „ Alpina minor, *Booth.*

Leaves broad, thick, somewhat adpressed, and incurved, in whorls of three, deep shining green below, glaucous gray on the upper surface, with a green margin, linear and blunt-pointed, dense, and one fourth of an inch long. Branches numerous, flat, prostrate, the smaller ones angular, rigid, and thickly clothed with foliage, which all face one way, and remain on the branches for years. Berries like those of the common Juniper, but much longer.

A creeping shrub, seldom growing more than one foot high, but spreading to a great distance on all sides, and quite dense.

It is found in England and Scotland, on mountains, on the Alps, seldom below 5000 feet, but up to 9000 feet of elevation, on the higher summits of the Apennines, and occurs on the Carpathian Mountains, in Lapland as far as the Northern regions, on the Altai Mountains, in Greenland, and the higher mountains of Portugal, and on the Alpine regions and snow line of the Pyrenees. This is a very distinct kind from Juniperus Canadensis, with which many writers confound it.

No. 9. JUNIPERUS OBLONGATA, *Loudon*, the Caucasian Juniper.
Syn. Juniperus Caucasica, *Fisch.*
„ „ interrupta, *Wendland.*
„ „ communis oblonga, *Loudon.*
„ „ „ Caucasica, *Endlicher.*
„ Thuiæcarpus juniperinus, *Trautv.*

Leaves in whorls of three, long, narrow, rigid, lance-shaped, acute-pointed, spreading and pointing outwards, bright green on one side, and glaucous gray on the other, distant and without foot-stalks. Branches straggling, very numerous, and curved upwards at the points, with the branchlets slender, branching, and drooping. Berries very small, oblong, in threes round the branchlets, without any foot-stalks, of a purplish colour, covered with a glaucous bloom, and divided on the top by two or three grooves, radiating from the centre, each fruit containing either two or three hard, bony seeds, in a dry spongy flesh.

A large straggling, many-stemmed bush, growing from three to four feet high, but covering a large space along the ground.

It is found on the sub-Alpine Mountains in the Western Caucasus, on the Talusch Mountains, in South Western Russia, and on the Taurian Mountains.

It is a very distinct and hardy kind.

No. 10. JUNIPERUS OXYCEDRUS, *Linn.*, the Prickly Cedar, or large brown-fruited Juniper.
Syn. Juniperus Monspeliensium, *Lobel.*
„ „ Oxycedrus Phœnicea, *Dodon.*

Leaves dull green, distant, three in a whorl, spreading, very sharp pointed, lanceolate, with two furrows on the upper side, angular below, and nearly the same colour on both sides. Branches furrowed; branchlets angular, slender, and rather pendent at the points. Berries round, very large, smooth, numerous, and chestnut brown, marked with two white lines on the apex.

A shrub or small tree, mostly with a centre stem, about ten or twelve feet high, with rather an open pendulous appearance, the berries of which are used for flavouring gin.

It is found growing on the Apennines at an elevation of 3000 feet, in the South of France, and is common in Spain and Portugal, and the countries bordering the Mediterranean, growing on the sea-coast.

It is quite hardy.

No. 11. JUNIPERUS RIGIDA, *Siebold*, the Stiff-leaved Japan Juniper.

Syn. Juniperus communis, *Thunberg*.

Leaves in threes, rather distantly placed, sessile, widely extended, rigid, quite straight, very narrow, linear, bluntly three-cornered, and with a long, slender, pallid, spiny point; they are channelled on the upper side, prominently and bluntly keeled on the under one, obtuse on the margins, of a pale glossy green colour, and three-quarters of an inch long. Branches terete, widely spreading, and covered with a smooth, light brown bark. Branchlets rather short, not very dense, prominently and bluntly three-sided, and covered with a yellowish bark. Berries globular, small, sessile, solitary, and of a dark-brown or blackish colour, thickly covered with a violet glaucous bloom, and produced laterally in great abundance on the short branchlets, which are covered with oval-pointed short leaves. Seeds oblong, angularly compressed, three-sided, and mostly in twos and threes, but sometimes singly in each berry.

This kind forms a handsome small tree, from 15 to 25 feet high, on the mountains in the Island of Nippon, in Japan, and is called "Moro," or "Sonora Mats" (slender or drooping Juniper), by the Japanese.

No. 12. JUNIPERUS RUFESCENS, *Link*, the Small, Shining, Red-berried Juniper.

Syn. Juniperus Oxycedrus Taurica, *Hort.*
„ „ Taurica, *Strangways*.

Syn. Juniperus Wittmanniana, *Fischer.*
„ „ communis Wittmanniana, *Carrière.*
„ „ Oxycedrus Wittmanniana, *Hort.*

Leaves in whorls of three, rigid, distant, spreading, very sharp-pointed, dull green, and without foot-stalks, nearly three-quarters of an inch long, lanceolate, tapering from the base to the point, with two furrows, slightly glaucous on the young foliage on the upper side, and angular below, but nearly the same colour on both sides, on the adult leaves. Branches spreading, angular, and straight. Branchlets slender, long, rather stiff, and dull brown. Berries globular, four-tenths of an inch in diameter, and of a smooth, shining, dull red colour, with very short foot-stalks, and marked on the apex with three white lines, radiating from the centre. Seeds three in each berry.

A shrub, or large bush, growing eight or ten feet high.

It is found in the South of Europe, inhabiting the shores of the Mediterranean, along the rocky districts of Spain and France, the sands of Spain, Portugal, Italy, and Greece, and the Western Islands, at elevations varying from 1000 to 6000 feet. It is also found in the Caucasus, and Taurian Mountains, but greatly influenced in size and foliage by elevation and climate.

No. 13. JUNIPERUS TAXIFOLIA, *Hooker,* the Yew-leaved Juniper.

Syn. Juniperus oblonga pendula, *Loudon.*
„ „ pendula vera, *Hort.*
„ „ communis pendula, *Hort.*

Leaves in whorls of three, linear, slightly rounded at the point, rigid, spreading, upper side hollow, two furrowed, and glaucous, the under one smooth, dark green, with a strong elevated rib along its centre, terminating in a blunt point, and without any foot-stalk. Branches few, scattered on the stem, rather spreading, and pendulous at the ends, smaller ones angular, pendulous, and but little forked, flexible, and of a dull yellow colour. Berries very small, solitary, globular, smooth on the surface, and of a glaucous violet colour when ripe, nearly sessile, or on very short branchlets, imbricated with oval-pointed short leaves.

This kind forms a handsome pendulous bush, from eight to ten feet high, and is a native of the Island of Loo-Choo and the north of China.

It is quite hardy.

Section II. SABINA. The Savin Junipers.

Leaves, in opposite pairs, mostly awl-shaped, slightly divergent, and loosely imbricated in the adult plants.

Berries, mostly very small, and numerous.

No. 14. Juniperus Bermudiana, *Linnæus*, the Bermuda, or Pencil Cedar.

Syn. Juniperus oppositifolia, *Mönch.*
„ „ Barbadensis, *Linnæus.*
„ „ Cedrus Bermudæ, *Ray.*

Leaves of two sorts, either in pairs, opposite, and very much drawn together along the shoots, or in whorls of three, spread open and needle-shaped, very dense, nearly half an inch long, tapering from the base to the point, rigid, smooth, narrow, and quite straight, channelled above, and glaucous, slightly keeled, and without any gland on the under side, light green when young, but much darker when old, and seldom growing on the under part of the branches. The other form, which is that of the berry-bearing kind (female), has the leaves on the mature plant, in opposite pairs, short, closely drawn together along the branches, imbricated, and not so dense, ovate-lanceolate, and in four rows. Stem erect. Branches spreading, and furnished with a great number of smaller ones, completely covered with leaves. Berries small, globular, solitary on the ends of the branchlets, and of a dark brown colour, inclining to purple when ripe.

A pyramidal dense-headed tree, with the lower branches rather spreading, and attaining a height of forty or fifty feet, in the Islands of Bermuda, the Canary Islands, and Barbadoes.

This is the tree which furnishes the wood from which cedar pencils are made.

It is not hardy in England.

No. 15. JUNIPERUS DAVURICA, *Pallas*, the Daurian Juniper.

Syn. Juniperus fœtida davurica, *Spach.*

The leaves are of two kinds, and either opposite or in threes, and differ in the different sexes; those on the male plant are very small, decurrent, closely imbricated in four rows, convex on the back, with an oblong gland in the centre, and a short point; while those on the female plant are in threes, linear, awl-shaped, quite open, spreading, sharp-pointed, and thickly placed along the branchlets; they are channelled and whitish on the upper part, convex on the back, and mostly furnished with a linear-shaped gland in the centre, and, when fully expanded, a quarter of an inch long. Branches terete, forked, and wide-spreading. Branchlets somewhat long, slender, quadriform, much extended, or somewhat pendulous, and closely covered with imbricated, ovate-rhomboid leaves in four rows. Berries small, solitary, lateral, somewhat globular, or subturbinate, very bitter, and of a blackish colour when ripe, covered with a violet glaucous bloom, and two lines in diameter. Seeds ovate-oblong, and mostly single, but frequently in twos and threes in the same berry.

A low, decumbent shrub, with the sexes on different plants, found on the Altai and Daurian Mountains, in Siberia. The kind generally known in collections under the name of J. Daurica, is the same as J. Canadensis.

No. 16. JUNIPERUS DENSA, *Gordon*, the Dense or Bushy Indian Juniper.

Syn. Juniperus recurva densa, *Hort.*
" " " nana, *Hort.*

Syn. Juniperus communis Indica, *Madden.*
„ „ „ „ Alpina, *Winterbottom.*
„ „ „ „ nana, *Madden.*

Leaves in whorls of three, half-spreading, linear-lanceolate, very acute, pungent, of a pale yellowish green, and about the third of an inch long. Berries solitary, the size and shape of a small pea, dark blue, covered with a glaucous bloom, extremely resinous, aromatic, and mostly three-seeded; with three divergent furrows on the apex, connected at the extremities by an elevated scale, and thus forming a kind of platform on the top, with three lateral scales lower down the sides of the berry. The whole plant emits an exceedingly strong turpentine, or resinous smell, when bruised, and the berries ripen from August to November.

This is the Indian Juniperus communis of Major Madden, in his observations on the Himalayan Coniferæ, and the "Better," "Betr," "Bytr," and "Beetur," of the Bhotiyas; all vernacular variations in their dialect for yeast, or yielding yeast. In Kamaon it is called "Pumaroa," and, according to Dr. Jameson and Capt. Strachey, it is found near Bumpa and on the high mountains behind Mularee, at from 9500 to 10,500 feet of elevation, but penetrating into the heart of the snowy mountains to 14,000 feet. It is also found plentiful on the Bhotan Alps, near the Netee Pass, forming a dense diffuse bush, from three to six feet high. Major Madden found it in abundance on the Glacier Moraines, west of Mana, at 12,000 to 13,000 feet of elevation, where it is known to the Bhotiyas as "Churpinja." It was also found on the south face of the Wyrung Pass in Kunawur by Dr. Hoffmeister, at an elevation of from 11,000 to 12,000 feet, and Capt. Hutton found it on the Roo-Nung Pass; while its easternmost known position is at 10,000 feet on the Cheto Binaik, at the south entrance to the Alpine valley of Byans, where the Bhotiyas call it "Lhala." In Joohar it occurs on the higher mountains, at elevations of from 11,000 to 13,000 feet, where it is designated "Cheechia" by the the hill people. It is much used in temples as incense, where among the apparatus used are censers, filled with the burning embers of this Juniper, which are muffled about and put through many evolutions amidst the ceremonial mummeries, by the priests; while on the other hand, the Bhotiyas, who are somewhat careless in such matters, and look sharply to this world, and things substantial rather than spiritual, pay little attention to this Juniper, except for the useful purpose of making yeast, and for which purpose the fruit is sold in the Indian Bazaars, under the name of "Ubhul" and "Hoobair." It appears to be unknown on the Indian declivity of the Himalayas, and is a very distinct species, growing from three to six feet high, somewhat resembling Juniperus squamata, but not so wide spreading, and much taller in habit, and readily distinguished from that kind, and Juniperus recurva, by the pale yellowish-green tint of its foliage, and small three-seeded berries.

It is quite hardy, and frequently to be found in the nurseries, misnamed Juniperus recurva densa, a name previously applied to the male form of the Juniperus recurva, but from which our present plant is easily distinguished by its dwarf, dense habit, and small, three-seeded fruit, while that of Juniperus recurva has but a single seed in each berry.

No. 17. JUNIPERUS EXCELSA, *Bieberstein,* the Tall Crimean Juniper.

Syn. Juniperus Sabina Taurica, *Pallas.*
„ „ „ excelsa, *Antoine.*
„ „ „ polycarpos, *Antoine.*
„ „ „ isophyllos, *Antoine.*
„ „ isophyllos, *Kotschy.*
„ „ polycarpos, *Kotschy.*
„ „ Olivieri, *Carrière.*
„ „ fœtida excelsa, *Spach.*
„ „ excelsa vera, *Hort.*
„ Cedrus Orientalis fœtidissima, *Tournefort.*

Leaves in twos, very small, glaucous gray, sharp-pointed, loosely imbricated, and spreading at the points on the young plants; but short, thick, ovate, imbricated, and four-rowed, with a sunken gland at the back of those on the old plants. Stem erect, thickly covered with numerous short compact branches, curved upwards towards the ends, and densely clothed with foliage; branchlets obtusely four-sided, straight, and rather rigid. Berries globular, slightly angular, half an inch in diameter; when full grown, of a deep glaucous purple, solitary, and on the ends of very short branchlets.

A handsome pyramidal small tree, growing 30 or 40 feet high, with the lower branches rather drooping when old.

It grows on the Islands in the Grecian Archipelago, Tauria, Syria, Armenia, and between Teflis and Erivan; also in Persian Armenia, and Georgia.

This kind is not found indigenous, either in India or North America, as stated by Mr. Loudon, in the Arboretum Britannicum; the American Juniperus excelsa of Lewis and Pursh being the Juniperus Occidentalis of *Hooker*, while the Juniperus excelsa of Indian writers is the Juniperus religiosa of *Royle*, and both very distinct from the Crimean kind.

JUNIPERUS EXCELSA STRICTA, *Rollisson*, the Upright Tall Juniper.

Syn. Juniperus excelsa glauca, *Hort.*
„ „ Perkinsii, *Hort.*
„ „ venusta, *Hort.*
„ „ stricta, *Hort.*

This beautiful variety forms a tall, dense, narrow, conical head, tapering gradually from the ground to a sharp terminal point; and is of a fine silvery glaucous colour. It originated in the nursery of Messrs. Rollisson, at Tooting, and is quite hardy.

JUNIPERUS EXCELSA VARIEGATA, *Carrière.*

A very striking variety, with variegated leaves and branchlets, of French origin.

No. 18. JUNIPERUS FLACCIDA, *Schlecht*, the Loose-growing Juniper.

Syn. Juniperus fœtida flaccida, *Spach.*
„ „ gracilis, *Endlicher.*

Leaves of various forms, some opposite and in pairs, others in whorls of three, spreading at the points, needle or lance-shaped, very small and pointing upwards; three-quarters of a line long, with frequently an elongated gland on the back of the small, round, and closely imbricated leaves, on the smaller branchlets of the adult plants; those on young plants are spreading, straight, much longer, lance-shaped, and bright green on both sides. Branches naked towards the base, slender, horizontal, drooping at the points, and covered with a smooth, grayish-brown bark; branchlets numerous towards the end of the branches, four-sided, pliable, spread out, mostly growing on one side, and pendulous. Berries large, globular, solitary, and half an inch in diameter, with projecting, thin, acute-pointed scales, and of a deep purple colour, covered with a glaucous bloom.

A graceful, loose-spreading, pyramidal bush or small tree, growing from 20 to 30 feet high, with a drooping appearance.

It is found on the mountains of Atotonilco el Chico, Regla, and Real del Monte, in Mexico, at elevations of from 6000 to 8000 feet, where it produces Sandarac, but in much smaller quantity than the Mexican Juniper (J. Mexicana).

It is very distinct and tolerably hardy.

No. 19. JUNIPERUS PSEUDO-SABINA, *Fischer*, the Siberian Savin.

The leaves are of various forms and sizes, on different parts of the plant; those on the primary branches and intermediate branchlets are open, spreading, subulate, rigid, straight, thickly placed in threes, or in opposite pairs, channelled and glaucous on the upper surface, rounded on the back, spiny pointed, and two lines long; while those on the external fertile branchlets are very small, ovate, somewhat obtuse at the apex, concave on the back, with a sunken gland in the centre, and closely imbricated in four rows. The principal branches are rather long, and obliquely extended, with the lesser ones and intermediate branchlets short, numerous, thickly placed, and covered with open, stiff, spiny, awl-shaped leaves, mostly in threes; fertile branchlets short, slender, much forked, and cylindrical, or somewhat quadriform by the small, closely imbricated leaves. Berries solitary, terminal, ovate, or oblong, smooth, nearly black, half an inch in diameter, and containing one large ovate seed.

A low-spreading, dense shrub, three or four feet high, and somewhat resembling the common Savin, but destitute of the strong odour of that kind.

It is found in Siberia, on the Songarian and Baical Alps, and on the Altai and Daurian Mountains.

No. 20. JUNIPERUS PROSTRATA, *Persoon*, the Prostrate-branched Juniper.

Syn. Juniperus repens, *Nuttall.*
„ „ Hudsonica, *Loddiges.*
„ „ Sabina prostrata, *Loudon.*
„ „ „ humilis, *Hooker.*
„ „ horizontalis, *Mœnck.*
„ „ Alpina, *Loddiges.*
„ „ fœtida multicaulis, *Spach.*

Leaves in twos, alternately opposite, very short, loosely placed over each other, and irregularly four-rowed, very dense, concave above, convex below, and terminating in a very sharp point, stem-clasping, dull shining green, and with the ends pointing outwards and quite free. Stems prostrate, long, slender, laying flat on the ground, flexible, and spreading; smaller ones short, dense, alternate, straight, and thickly placed on the upper side of the branches. Berries small, globular, or oblong, tuberculated, and when ripe of a glaucous black or blackish violet colour, on short branchlets, and solitary.

A prostrate shrub, trailing along the ground, and not rising more than six or eight inches high, but spreading over a large space.

It is found in the United States of America, on the sandy beaches of Lake Huron, and the hills along the Missouri River, near Fort Mandan.

No. 21. JUNIPERUS RECURVA, *Don*, the Drooping Indian Juniper.

Syn. Juniperus incurva, *Hamilton.*
„ „ repanda, *Hort.*
„ „ canescens, *E. I. Comp.*
„ „ Nepalensis, *Rinz.*

This is called "Aroo," and "Uguroo," (Eagle's Bush), in Nepal, probably from its growing among the rocks where the eagles resort.

Leaves in threes, linear-lanceolate, bristly-pointed, loosely imbricated, and convex beneath. Branches and branchlets recurved, pendulous, not very numerous, and easily distinguished from all the other Indian species, by the persistent chaffy leaves of the past year, and by the mixture of the brown half-decayed chaffy ones of the past year with the greenish-gray ones of the present. Bark rough brown, curling up and scaling off. A bush, or low tree, very graceful in habit, growing from four to ten feet in height. It is found in Gossainthan, in Nepal, and in Bhotan, at an elevation of from 8000 to 10,000 feet, a small, but elegant tree; and in higher elevations, only a scrubby bush. Berries roundish oval, deep purple or nearly black when ripe, with a shining smooth surface; each berry contains only one seed. The berries and branches are burnt as incense in temples, and in other magical incantations, by the natives.

The sexes of this species are on different plants, and both very dissimilar in appearance; the male has longer and looser foliage, and a denser appearance; while the female form has much shorter and more closely imbricated, three-rowed leaves, and a slenderer appearance; the female form is that which is most common in collections.

No. 22. JUNIPERUS RELIGIOSA, *Royle,* the Pencil, or Incense Juniper.

Syn. Juniperus excelsa, *Madden,* and all other writers on Indian Conifers under this name.

Leaves closely imbricated in opposite pairs, somewhat obtuse, with a central gland or raised line on the back, four-rowed, and imbricated, or spreading, acute, and disposed in threes; glaucous and subulate on the young plants, but both forms are frequent. Branches and branchlets very similar, but more compact than those of Cupressus torulosa. Berries of a purplish colour, the size of a small pea, rounded or two-lobed, smooth, and with only one or two small seeds in each, dry, resinous, and with a strong aroma when bruised, and very disagreeable taste. Male and female flowers on separate plants.

This species is rarely found below 10,000 feet of elevation, and gradually dwarfing into an Alpine creeping shrub at 12,000 or 13,000 feet; but ascending in this form to 13,500 feet on the south flank of Kunchinjinga, and to 15,200 feet on the rearward ranges. It forms a large, densely-branched, stiff tree, growing from 60 to 80 feet high, in eastern Nepal. Major Madden saw a tree at the Songnum Temple, thirteen feet in circumference at five feet from the ground, and about 100 feet high. Captain Strachey found it at "Hunu," 12,000 feet above the sea; but it is found in many parts, particularly at Kunawur; on Gossainthan, in Nepal; in Kamaon, near Nantee; and appears to flourish best at elevations of from 9000 to 13,000 feet, but never below 7000 feet in a native state.

Dr. Griffith found it in Bhotan, about temples and in woods, from 9000 to 11,000 feet of elevation. In "Kooloo," at an elevation of 11,000 feet, it is preferred for its timber, and its sprigs are burnt for incense. It is commonly planted by Buddhist temples, where it is used in all sacred ceremonies, hence its specific name, "religiosa;" the name commonly applied to this tree (excelsa) by writers on Indian Conifers having been previously applied to a Crimean plant, now common in English collections. The natives of Durii, in Gilgit, on a particular day, burn goats' fat and Juniper branches upon the altar, and dance, sing, and drink wine; they also fry Juniper branches and berries in goats' grease, in small dishes, for incense. Mr. Winterbottom found it on all the elevated tracts of Astor and Gilgit, even in the north-east quarter of Cashmere, used for the same purpose under the name of "Lewi," or "Newr" (Juniper), and "Dhoop" (incense). It is also found in the north-west of Sikkim and Nepal Proper, where it is called "Googgal Dhoop," and always burned in temples as incense on festive days. It has scaly bark, of a deep brown colour, and timber exactly similar to that used in Cedar pencils, with a scent equally aromatic.

This Juniper is called "Shirkoo," or "Shirgoo," in Kamaon, and "Shoor," "Shoorpa," "Shookpa," and "Chopka," all vernacular variations in the Bhotan dialects for *incense*, or used for that purpose. It is also the Juniper Cedar of Indian travellers, who describe it as a large, dark, dense-branched, stiff tree, growing in eastern Nepal, from 60 to 80 feet high; while in Sikkim it only attains a height of from 15 to 20 feet, and at all very high and extreme elevations it becomes a creeping shrub or sprawling bush. Timber red, close grained, and exempt from the ravages of insects.

The Himalayan Cedar wood, so called, or miscalled, by Dr. Royle, is the timber of Juniperus religiosa (the J. excelsa of India), and not that of Sanscrit record, which latter is that of the Deodar Cedar. He also confounds Juniperus religiosa with Cupressus torulosa, and states that Cupressus torulosa grows at an elevation of 11,500 feet in Kunawur, on the borders of Chinese Tartary—a statement totally fallacious; for Cupressus torulosa has never been found in any part of India above 7000 or 8000 feet of elevation, and generally very much dwarfed or stunted in such situations; while, on the other hand, Juniperus religiosa (excelsa of Indian writers) is seldom or ever found below 9000 or 10,000 feet, in a native state, but up to 14,000 or 15,000 feet on the rearward ranges where it becomes a creeping Alpine shrub, although at an elevation of 9000 or 10,000 feet it is a large tree, from 70 to 80 feet high.

It is perfectly hardy, and resembles J. excelsa, but it is more open in the head.

No. 23. JUNIPERUS SABINA, *Linnæus*, the Common Savin.

Syn. Juniperus Sabina cupressifolia, *Aiton.*
„ „ cupressifolia, *Hort.*
„ „ Sabina horizontalis, *Hort.*
„ „ „ vulgaris, *Endlicher.*
„ „ Lusitanica, *Miller* (not of others).
„ „ Lycia, *Pallas* not *Linnæus.*
„ „ fœtida Sabina, *Spach.*

Leaves in opposite pairs, imbricated, oval, somewhat pointed, and convex on the back, or awl-shaped, and remote. Branches nearly straight, very much ramified, younger ones entirely covered with imbricated leaves, which have a very disagreeable odour, and very bitter taste. Berries of a blackish-purple colour, generally one-seeded, small, oval, smooth, and about the size of a small currant.

A low, much-branched shrub, but sometimes growing six or seven feet high on the Lower Alps in Southern Europe. It occurs in the mountains of Lombardy, in the Apennines, on the Pyrenees, in Greece, on the Spanish Peninsula, but always as a mountain plant. It is also very abundant on the northern and western slopes of the Alps, on the Altai and Taurian mountains.

JUNIPERUS SABINA NANA, *Hort.*, the Green Carpet or Dwarf Savin Juniper.

Syn. Juniperus Sabina pumila, *Hort.*
„ „ prostrata, *Risso*, not *Torrey.*
„ „ elegans, *Hort.*

This variety is very much smaller, more spreading and flatter than the common Savin, and rises but little from the ground. It is the Green-Carpet Juniper, and is not unfrequently confounded with the Grey-Carpet Juniper (Juniperus Sabinoides), to which it bears considerable resemblance, except in colour. It is found on the mountains in the south of Europe.

JUNIPERUS SABINA VARIEGATA, *Loudon*.

This variety differs from the ordinary Savin in having some of its branchlets and foliage pale-yellowish white, intermixed with the green ones, and forms a very pretty variety.

No. 24. JUNIPERUS SABINOIDES, *Endlicher*, the Grey-Carpet Juniper.

Syn. Juniperus Sabina tamariscifolia, *Aiton*.
„ „ „ Alpina, *Hort.*
„ „ „ elegans, *Booth.*
„ „ fœtida tamariscifolia, *Spach.*
„ „ thurifera, *Parlatore*, not *Lambert* or *Loudon*.
„ „ cinerea, *Carrière.*

Leaves in opposite pairs, the lower ones spreading, almost needle-shaped, very short, glaucous, blue on the upper side, broadest at the base, tapering to a very sharp point, half opened, and spread outwards, but on older plants much more approaching together, smaller, scale-formed, loosely imbricated, and sharp-pointed. Branches spreading out horizontal, very dense and stiff; branchlets very numerous, straight, short and tufted. Berries quite round, of a blackish violet colour, one-seeded, larger than those of the Common Savin, and a little flatter, and more glaucous.

A dense little bush, spreading out horizontally, and not more than two or three feet high, found in Spain and the mountains of Southern Europe.

No. 25. JUNIPERUS SQUAMATA, *Don,* the Scaly-leaved Nepal Juniper.

Syn. Juniperus squamosa, *Hamilton.*
„ „ dumosa, *Wallich.*
„ „ Lambertiana, *Wallich.*
„ „ rigida, *Wallich* (not of Thunberg).
„ „ ? Wallichiana, *Hooker.*

Leaves in threes, closely imbricated, ovate-oblong, more or less acute, inflexed at the point as if obtuse; the withered ones persistent, with very long points, and adhering to the branches like scales. Branches numerous, creeping, and a little set up at the points; branchlets stiff, very numerous, and thickly covered all over with foliage. Berries ovate-obtuse, or ovate-oblong, very glossy, varying from light-blue to nearly black, one-seeded, with three or four opposite scales about the centre, and two small ones near the top, which is umbilicate and furrowed; on old plants the upper branches have closely-imbricated, cypress-like leaves, while on the lower branches of young plants they are in whorls of three, linear and lanceolate, acute, stiff, more or less spreading, green on the upper side, white below, but varying in some so as to leave both sides of the foliage bright green.

A large, dense, prostrate, much-branched shrub, growing two or three feet high, in Nepal, and on the Bhotan Alps. In Cashmere and the adjacent regions it is common at all elevations, particularly on the Indian face of the Himalayas from 11,000 to 13,000 feet. It is also common on the snowy ranges of Kamaon and Gurhwal, and penetrates into the heart of the Himalayas, to "Rimkin," at an elevation of 14,500 feet; its upper limits is 15,000 feet, and its lowest 9,000 feet, but is in greatest abundance between 12,000 and 13,000 feet. It also grows on the Choor mountains, where it forms extensive beds, overlaying the high, tabular masses of granite, which occur on or near the top, at an elevation of 12,000 feet, where it has the form of a large creeping bush, covered with its large, glossy, purplish-black fruit, which is well tasted, having but little bitter in them, and a single seed. It is the "Pama," or "Pudma," of Upper Kamaon and the Himalayas, and the "Googgal" of Cashmere, a word meaning incense, also the bastard or creeping Cedar of travellers.

The Bhotiyas call this species "Parpinja" (creeping Juniper); and, according to Dr. Hoffmeister, an intoxicating drink is prepared from the berries of the ground-Juniper, which is known all over the Busehur part of the Himalayas by the name of "Theloo," (spirituous liquor). Its Khasiya names are "Bhedara," and "Bindhara," and signify yeast, or yielding yeast; for which purpose the sprigs are used in Upper Kamaon in the preparation of yeast, as the aromatic crushed berries of the common Juniper is in Europe to flavour gin. The yeast is made by moistening coarse barley flour, which is made into a ball, and covered all round with the leaves and sprigs of this Juniper; the whole is then closely wrapped up in a blanket, and kept warm, where in three or four days it ferments and becomes fit for use. It is also used in the distilling arrack from rice, the berries having but little bitter in them.

No. 26. JUNIPERUS THURIFERA, *Linnæus*, the Spanish Juniper.

Syn. Cedrus Hispanica, *Tournefort.*
„ Juniperus Hispanica, *Miller.*
„ „ fœtida Hispanica, *Spach.*
„ „ oophora, *Kunze.*
„ „ turbinata, *Gussone.*

Leaves in twos, opposite, very small, narrow, glaucous-gray, loosely imbricated, in four rows, sometimes spreading at the points, rigid, straight, and sharp-pointed, concave at the base on the upper side, convex at the back, stem-clasping, and mostly without any gland on the under side; stem erect, thickly covered all round with branches, curved upwards at the points; branchlets very dense, short, all growing on the outer side, curving upwards, and forming a dense pyramidal head, tapering to quite a point at the top. Berries very large, solitary, obovate or egg-shaped, glaucous-black when ripe, reddish brown when immature, and bright green when young, and growing at the points of the smaller branchlets, which are entirely covered with small imbricated leaves.

A very handsome, dense, pyramidal, small tree, branching to the ground, and tapering to a sharp point, and attaining a height of from 20 to 30 feet.

It is found on the mountains in the province of Seville, in Spain; and in Portugal, at an elevation of from 3000 to 4500 feet above the sea.

It is quite hardy.

No. 27. JUNIPERUS VIRGINIANA, *L.*, the Virginian or Red Cedar.

Syn. Juniperus arborescens, *Mœnch.*
" " Caroliniana, *Hort.*
" " Virginiana vera, *Loddiges.*
" " " vulgaris, *Carrière.*
" " major Americana, *Parkinson.*

Leaves in twos, opposite, and four-rowed; but frequently in whorls of three on the young shoots, those on the adult plants closely imbricated, very small, and sharp-pointed; but afterwards, as they get older, become spread out at the points, glossy and of a light green, in the common form of the tree, frequently turning to a tawny brown colour in winter. Branches horizontal, numerous, close together, and feathered to the ground; branchlets four-sided, slender, straight, spreading, and very numerous on the outer parts of the branches. Berries dark purple, very small, ovate, smooth, or slightly warted on the surface, and covered with a white glaucous powder. Male and female flowers mostly on the same plant, but sometimes on separate ones.

A handsome tree, growing 40 or 50 feet high, and one foot and a half in diameter.

It is found abundantly in the United States of America, on the Cedar Island in Lake Champlain, and in the district of Maine, from whence it spreads without intermission to Cape Florida, and thence round the Gulf of Mexico, a distance of more than 3000 miles; in Virginia and the more Southern States, it is common, but is only seen in the form of a shrub in the open, dry, sandy soils of the Western States.

There are the following varieties :—

JUNIPERUS VIRGINIANA CAROLINIANA, *Loddiges*, the Carolina Red Cedar.

Syn. Juniperus Caroliniana, *Du Roi.*
„ „ Virginiana sparsifolia, *Hort.*
„ „ „ stricta, *Hort.*

A fine, upright variety, with a compact habit, and leaves more or less spreading, acerose or lanceolate, decurrent, scattered, and glaucous on the upper surface. Berries very small, oval and of a violet colour when ripe.

A desirable variety, on account of its upright habit.

JUNIPERUS VIRGINIANA BARBADENSIS, *Loudon.*

Syn. Juniperus Virginiana Australis., *Carrière.*
„ „ „ gracilis, *Hort.*
„ „ Bedfordiana, *Knight.*
„ „ Gossainthanea, *Loddiges.*
„ „ Barbadensis, *Michaux.*

This variety has much slenderer branches, which are reflected at the extremities, and frequently drooping; branchlets very numerous, long, straight, slim, and frequently pendent. Leaves in opposite pairs, or in whorls of three, needle-shaped, straight, narrow, and sharp-pointed on young plants; but very short and blunt-pointed on those of the adult plants, and closely imbricated.

A tree growing 50 or 60 feet high, with a trunk one foot and a half in diameter.

It is found in the Island of Barbadoes, and other Windward Islands, but has been widely distributed by the Loddiges under the name of Juniperus Gossainthanea, a name evidently originating in carelessness, for no such plant is to be found in that part of India, as is evident from the writings of such excellent and acute observers as Major Madden, Mr. Winterbottom, and Drs. Wallich, Hooker, and Griffith; for if such a tree existed in Gossainthan, it certainly would have been detected by one or other of those excellent travellers.

It is rather tender.

Juniperus Virginiana dumosa, *Loddiges*, the Bushy Red Cedar.

Syn. Juniperus dumosa, *Hort.*

A bushy variety of the Red Cedar, with a roundish spreading, but compact head, widest at the top, and with the leaves either very acute-pointed, spreading and straight or scale-formed, and closely imbricated in four rows.

Juniperus Virginiana glauca, *Hort.*

Syn. Juniperus Virginiana cinerescens, *Hort.*
„ „ „ argentea, *Van Houtte.*
„ „ argentea, *Hort.*
„ „ glauca, *Willdenow.*

This variety only differs from the species in having its foliage of a fine glaucous white colour.

Juniperus Virginiana humilis, *Hort*, the dwarf Red Cedar.

Syn. Juniperus Virginiana pumila, *Hort.*

This is a very dwarf, slender variety, of a pretty purplish tint, and with the shoots branching out in a peculiarly angular form.

A very attractive and distinct variety, forming a dense bush, only two or three feet high.

Juniperus Virginiana pendula, *Hort*, the Weeping Red Cedar.

Syn. Juniperus Virginiana Chamberlaini, *Hort.*

There are three forms of the pendulous Red Cedar to be found in collections; one the *male* form, another the *female* one, and the third a *bright-green* one. The male kind has shorter and much more numerous branchlets, while the female one has longer, slenderer, and much fewer branchlets; the third variety is of a beautiful light glossy green, and the handsomest of the three. The female form is generally known in collections as Chamberlain's Weeping Red Cedar, while the green one is called Juniperus Virginiana pendula viridis.

JUNIPERUS VIRGINIANA SCHOTTII, *Hort*, the Light-green Virginian Cedar.

Syn. Juniperus Schottii, *Hort.*
„ „ Virginiana viridis, *Hort.*
„ „ „ stricta, *Hort.*

A fine pyramidal variety, differing principally in its peculiar bright green colour.

JUNIPERUS VIRGINIANA TRIPARTITA, *R. Smith*, the Tripartite Red Cedar.

Syn. Juniperus tripartita, *Hort.*

A low spreading bush, from three to four feet high, with several stems, and quite the habit of growth of the common savin; the leaves are mostly open, very acute and straight; but frequently those on the fertile branchlets are scale-formed, and closely imbricated.

A very distinct kind, of continental origin, and quite hardy.

JUNIPERUS VIRGINIANA ALBA VARIEGATA, *Hort.*

This variety has whitish leaves and branchlets, intermixed with the ordinary green ones.

JUNIPERUS VIRGINIANA AUREA, VARIEGATA, *Hort.*

This variety has a portion of the branchlets of a fine golden yellow, scattered all over the plant.

Section III. CUPRESSOIDES. THE CYPRESS-LIKE JUNIPERS.

Leaves, in opposite pairs, four-rowed, small, scale-formed, and closely imbricated in the adult plants.

Fruit, more or less angular, and furnished with external bracts, or humps.

No. 28. JUNIPERUS CHINENSIS, *Linnæus*, the Chinese Juniper.

Syn. Juniperus dimorpha, *Roxburgh.*
„ „ diœcia, *Makoy.*

This species has the male and female flowers on separate plants, and are very dissimilar in appearance.

A—Male form.

Juniperus Chinensis mas, *Linnæus.*
Syn. Juniperus Thunbergii, *Hooker.*
„ „ diœcia, *Makoy.*
„ „ dimorpha, *Roxburgh.*

Leaves in whorls of three, lance-shaped, sharp-pointed, channelled on the upper side, and convex below, sometimes very glaucous or bright green, spreading, distant, stiff, and without any footstalks, densely clustered on the smaller stem-shoots and bottom branches. Branches irregularly alternate, and thickly placed on the stem, mostly pointing outwards, and spreading, smaller ones straight, very thickly placed on the lateral branches, and thickly covered with male flowers, of a bright yellow colour.

B—Female form.

Juniperus Chinensis fœmina, *Linnæus.*
Syn. Juniperus Reevesiana, *Hort.*
„ „ flagelliformis, *Reeves.*
„ „ struthiacea, *Knight.*
„ „ fœmina, *Hort.*
„ „ cernua, *Roxburgh.*

Leaves in twos, opposite, closely imbricated, very short, scale-formed, ovate, slightly pointed, closely pressed over each other in four rows, stem clasping at the base, with an oblong sunken gland on the back, and pointing in the same direction as the shoot. Branches scattered, but thickly placed on the stem, pointing outwards and spreading; smaller ones slender, four-sided, partially rounded, seldom forked, and frequently pointing downwards. Berries very small, of a glaucous violet brown when ripe, and variously shaped, in some rounded, two-lobed, or angular; others globular, or oblong, depressed on the surface, and mostly containing only one or two seeds in each.

The open leaves are frequently alike on both sexes when young, and frequently on the smaller stem-shoots and bottom branches of the female plant; while the mature leaves on the outer and upper branches of the male plant become like those of the female, small, closely pressed over each other, and stem clasping.

This very fine species attains a height of from fifteen to twenty feet, particularly the male form, which is much the handsomest plant, with a pyramidal head.

It is found abundantly in China, Japan, and adjoining islands, and is perfectly hardy.

This kind is called "Fi-noki-suga" (slender evergreen) by the Japanese, and "Inuki" (wild or native shrub) by the Chinese. There are the following varieties:—

JUNIPERUS CHINENSIS DENSATA, *R. Smith*, the Dense-growing Juniper.

Syn. Juniperus Wallichii, *Hort.*

This kind forms a dense pyramidal shrub, from ten to twenty feet high, with the main stem upright, and all the numerous branchlets more or less pendulous, and closely imbricated, with elliptic-pointed, glossy bright-green leaves.

It is a native of the Himalayas, and quite hardy.

JUNIPERUS CHINENSIS VARIEGATA, *Fortune*, the Variegated Chinese Juniper.

Syn. Juniperus Chinensis argentea, *Hort.*

This variety differs from the species (male form) in being of a beautiful glaucous green, regularly interspersed with branchlets of a silvery white colour. It is of Japanese origin, and was first introduced by Mr. Fortune.

JUNIPERUS CHINENSIS AUREA, *Rollisson*, the Golden Chinese Juniper.

This is a fine variety, with a portion of the branchlets of a bright golden yellow.

No. 29. JUNIPERUS JAPONICA, *Carrière*, the Japan Juniper.

Syn. Juniperus procumbens, *Siebold*.
„ „ Chinensis procumbens, *Endlicher*.

Leaves in whorls of three, thickly set on the branches, spreading, rigid, and tapering to a sharp prickly point; straight, smooth, bright green and convex, with hardly any trace of the mid-rib on the under side; channelled with two glaucous lines on the upper one, while those on the outer branches in the adult plants are very small, ovate, blunt at the points, closely imbricated, and three-sided. Branches spread out, numerous, twisted, and frequently bent downward at the ends; smaller ones very dense, short, rigid, and covered at the ends with small closely-imbricated leaves. Berries small and solitary, at the points of the small lateral branchlets, irregularly egg-shaped, gibbous, and sometimes two-lobed, containing from one to three seeds in each, and of a very deep purple, covered with a glaucous powder, before and when ripe.

A small dense-spreading bush, not growing more than one or two feet high, found plentiful on the mountains of Japan.

It is quite hardy, very distinct, and has the following varieties:—

JUNIPERUS JAPONICA AUREA, *Fortune*, the Golden Variegated Japan Juniper.

This variety differs from the ordinary form, in having a good portion of the secondary branches and branchlets of a golden yellow colour, and when well intermixed, forms a very striking object.

JUNIPERUS JAPONICA ALBA, *Standish*, the White Variegated Japan Juniper.

This is a very nice variety, with a portion of its lesser branches and branchlets, of a white colour; first introduced from Japan, by Mr. John Standish, of the Royal Nursery, Ascot.

No. 30. JUNIPERUS MEXICANA, *Schlecht*, the Mexican Sandarac Juniper.

Syn. Juniperus Deppeana, *Steudel.*
„ „ gigantea, *Roezl.*
„ Cupressus Sabinoides, *Humboldt.*

Leaves (on the adult plants) in opposite pairs, very short, three-fourths of a line long, ovate-pointed and loosely imbricated; but ovate, blunt-pointed and closely imbricated on the small branchlets, four-rowed and marked on the back with an elliptic gland, and of a dull grayish colour. Leaves (on the young plants) mostly in threes, round the branches, sharp-pointed, needle-shaped, rigid, spreading, loosely imbricated, and dull glaucous green. Branches angular, horizontal, slightly elevated at the ends; smaller ones covered with sharp-pointed, scaly leaves, extended at the points, and with an elevated gland at the back; branchlets four-sided, rather cylindrical, short, stiff, and straight. Berries solitary, on short scaly foot-stalks, half an inch in diameter, irregularly globular, with a few gouty humps, or tubercles, terminated with very thin scales on the outside, and of a dark purple colour, dusted over with a glaucous powder.

A tree commonly found growing from 20 to 30 feet high, with a pyramidal-shaped head, producing a pale yellow resinous matter, frequently found in drops or lumps on the branches and resembling sandarac.

M. Roezl describes it as a magnificent tree, growing from 80 to 100 feet high, and nearly three feet in diameter at the base, with a very straight stem; and the Indians at Tlaxcal state that it grows to a great size on the mountains near Tenancingo, at an elevation of from 7000 to 8000 feet.

It is found plentiful on the Real del Monte Mountains, and on the Llanos of Perote and Mineral Monte, at an elevation of from 8000 to 10,000 feet, and is called by the Mexicans, "Cedro," and "Sabina."

It is tolerably hardy.

No. 31. JUNIPERUS PROCERA, *Höchst*, the Abyssinian Juniper.

Syn. Juniperus Lasdeliana, *Lawson.*
„ „ excelsa procera, *Carrière.*

Leaves in pairs, opposite, thick, fleshy and very small, ovate-pointed, scale-like, and imbricated, with an oblong gland on the back, in the adult trees, but needle-shaped, loosely spreading, and sharp-pointed on those of the young plants. Branches roundish and spreading; branchlets numerous, and dense on the outer parts. Berries oval, the size of a common pea, and glaucous.

Timber hard, firm, and durable.

This is said to be a huge tree, found in Abyssinia, of which little is known, except that it very much resembles the tall Crimean Juniper (J. excelsa), and probably not different except in size, which may be caused by the favourable effects of climate, soil, etc.

No. 32. JUNIPERUS OCCIDENTALIS, *Hooker*, the Western Tree Juniper.

Syn. Juniperus Hermanni, *Persoon.*
„ „ excelsa, *Lewis* and *Pursh*, not *Willdenow.*
„ „ alba, *Knight.*
„ „ dealbata, *Loudon*, not *Douglas.*
„ „ fragrans, *Knight.*
„ „ pyriformis, *Lindley.*
„ „ Californica, *Carrière.*
„ „ Andina, *Nuttall.*

Syn. Juniperus bacciformis, *Knight.*
„ „ tetragona osteosperma, *Torrey.*
„ „ occidentalis fragrans, *Hort.*
„ Chamæcyparis Boursierii, *Decaisne.*
„ Cupressus bacciformis, *Knight.*

Leaves (on the adult trees), in opposite pairs, almost round, or ovate, blunt-pointed, closely imbricated, in four rows, convex, and with a hollow gland upon the back, full of clear resin; very small, and of a silvery white colour.

Leaves (on the young plants) ternate, needle-shaped, or lanceolate, spreading at the points, and distant; but as the plants get older, gradually change to those of the adult ones. Branches very dense, spreading, and cylindrical, with a dark-coloured bark; branchlets, numerous, short, four-sided, alternate, and of a glaucous silvery colour; those of the open shoots on the young plants, almost white, and with a very strong disagreeable smell when bruised. Berries globular, smooth, deep purple, covered with a silvery white powder, and produced singly on the ends of the small branchlets on the upper part of the tree.

A tall tree, growing from 60 to 80 feet high, and two or three feet in diameter.

It was first found by Douglas, growing on the Stony Islands in the Columbia River, and in the valley of the Rocky Mountains; a tree 60 or 80 feet high. Jeffrey more recently found it in the Klamet Mountains, in the Oregon territory, at an elevation of 5000 feet, growing in desert tracts of country, where there was scarcely any other vegetable production; the soil being almost entirely composed of sand, and very dry. A tree 40 feet high, with an umbrella-shaped top, and sometimes three feet in diameter, with foliage covered with a silvery glaucous bloom, and very strong scented.

It is quite hardy, but emits a strong disagreeable odour when bruised.

No. 33. Juniperus pachyphlæa, *Torrey,* the Sweet-fruited Juniper.

Syn. Juniperus Sabina pachyphlæa, *Antoine.*

Leaves in threes, scale-formed, closely imbricated along the branchlets, ovate-rhomboid, somewhat acute-pointed, very glaucous, and convexly-keeled on the back, with a sunken glaucous oval gland in the centre; branchlets rather short, obtusely four-sided and somewhat closely arranged, horizontally in two rows. Berries solitary globose, half an inch in diameter, and of a brownish colour, thickly covered with a white glaucous bloom, sweet-tasted, and produced at the ends of the short, erect branchlets.

A moderate sized tree, with terete branchlets, covered with a white glaucous bloom, found on the Zuni mountains, in the western part of New Mexico.

It is hardy, and the whole plant has quite a white appearance.

No. 34. Juniperus Phœnicea, *L.* the Phœnician Juniper.

Syn. Juniperus tetragona, *Mœnch.*
„ „ Phœnicea sclerocarpa, *Endlicher.*
„ „ Langoldiana, *Hort.*
„ Cupressus Devoniana, *Hort.*
„ „ bacciformis, *Willdenow.*
„ Juniperus bacciformis, *Carrière.*

Leaves opposite, or in threes, bright green, imbricated, bluntly egg-shaped, somewhat channelled, and convex on the back, and perfectly smooth; but on some of the branches a few open, sharp, lanceolate, glaucous leaves are found in whorls of three. Young branches, entirely covered with very small leaves, which are disposed in threes, opposite to each other, closely covering the surface of the branchlet, and laid one upon another, like scales. Male and female flowers mostly on separate plants, but sometimes they are both found on the same plant. Berries, terminal, about the size of a pea, pale brown, shining, of an irregular, globular form, slightly compressed and angular; the pulp is dry and fibrous, and each berry contains three or four seeds.

A small tree, or large bush, from 15 to 20 feet in height, loaded with numerous branches, so disposed as to form a regular pyramid.

This species is found on the rocks along the shores of the Mediterranean, particularly on the French Coast; from Nice to Calabria, and Sicily, and along the Ionian Sea, the Adriatic Gulf, in Greece, the Levant, and in Barbary.

There is the following variety:—

JUNIPERUS PHŒNICEA LYCIA, *Loudon*, the Lycian Juniper.

Syn. Juniperus Lycia, *Linnæus*.
" " Phœnicea malacocarpa, *Endlicher*.

This variety differs from the species in being rather smaller in all its parts, but more spreading and bushy, of a deeper green, and in the berries being much larger, rounder, less angular, and nearly black (not pale yellow) when ripe, and in being soft and glaucous.

It grows from 10 to 15 feet high, and is found growing in the South of Europe, the Levant, in Italy, and Spain.

This is the Cypress-leaved Cedar of the Greeks, which produces the "Olibanum," used as incense in religious ceremonies on the Continent.

No. 35. JUNIPERUS SPHÆRICA, *Lindley*, the Globular-fruited Juniper.

Syn. Juniperus Fortunii, *Van Houtte*.
" " Chinensis Smithii, *Loudon*.

Leaves in opposite pairs, imbricated, very rarely sharp-pointed, except on young plants; scale-formed, blunt-pointed, slightly spreading at the points, of a shining, lively green colour, and with a little circular sunken pit or gland on the back of the leaves. Branches numerous, slender, and curved. Branchlets roundish, four-sided, thickly covered with small, scale-like foliage, and bright green. Berries exactly round, tolerably large, twice the size of those of the Common Chinese Juniper (Juniperus Chinensis), smooth, and of a violet glaucous colour.

This species, according to Fortune, grows to the height of 30 or 40 feet in the northern parts of China, forming a stately tree. It has long been cultivated in England under the name of Juniperus Smithii.

Juniperus sphærica glauca, *Fortune*, is a very different kind from the above, and of which little is known.

No. 36. JUNIPERUS TETRAGONA, *Schlecht*, the Tetragonal Juniper.

Leaves on the adult plants, in pairs, opposite, fleshy, obtuse, egg-shaped, thickest at the points, and very closely imbricated, from half to three-fourths of a line long, and regularly and closely in four rows, but rather distant when old, and withered on the branches; and of a dull green colour, slightly glaucous when young. Branches spreading, nearly flat, with the ends turned upwards; smaller ones short, and thickly covered with truly four-sided branchlets. Branchlets straight, regularly four-sided, very numerous, stiff, spread out, and the fruit-bearing ones slightly curved, and very dense at the ends of the branches. Berries solitary, about the size of a small pea, globular, with a few scars, and thin scales on the surface, of a dark purple colour, with a slight glaucous bloom on the surface, and three or four lines in diameter.

A beautiful low-spreading shrub, growing from four to five feet high, plentiful on the mountains of Mexico, particularly on the mountains from Real del Monte to Chico, at an elevation of from 10,000 to 11,000 feet. It does not produce Sanderac, but is quite hardy.

DOUBTFUL KINDS, OR THOSE OF WHICH LITTLE IS KNOWN.

No. 37. JUNIPERUS CÆSIA, *Carrière.*

This kind is said to belong to the Savin tribe, and to have been found in the north of Europe, where it is said to be an erect bush, with numerous ascending branches and branchlets, covered with opposite smooth, glossy leaves, rounded on the under side, and glaucous blue above, more or less needle-shaped, or lanceolate and spreading. Probably Juniperus Virginiana glauca, which is sometimes named J. cæsia.

No 38. JUNIPERUS CERROSIANUS, *Kellogg,* the Island of Cerros Juniper.

Leaves small, ovate-acute, closely imbricated, with a sunken gland on the back, and arranged in six directions. Berries oblong or egg-shaped, brownish purple, thickly covered with a white glaucous bloom, and containing three seeds.

It forms a dense bush, or small tree, with horizontal, spreading branches, found on the Cerros Island, in California.

No. 39. JUNIPERUS PLOCHYDERMA, *Torrey.*

Of this kind little is known, beyond that it forms a low tree, with very long and widely extended branches, on the Zuni and Colorado Mountains, in New Mexico.

No. 40. JUNIPERUS RACEMOSA, *Risso.*

A kind said to be found in the south of Europe, by M. Risso, probably in Naples.

No. 41. JUNIPERUS SPHÆRICA GLAUCA, *Fortune,* the Glaucous Chinese Juniper.

Syn. Juniperus sp., nova, *Fortune.*

Mr. Fortune states that this kind is found in the north of China, growing from 15 to 20 feet high, with quite a white or glaucous appearance, even at a great distance.

Gen. LARIX. *Link.* The Larch.

Flowers monœcious, or male and female on the same plant, but separate; the male catkins small, without footstalks, and egg-shaped; the female ones erect, solitary, ovate, and much larger than the males.

Cones small, oval-obtuse, or somewhat cylindrical, and consisting of but few scales.

Scales persistent, leathery, thin towards the margins, and a little reflected or undulated.

Bracteas either longer or shorter than the scales, unevenly notched on the edges, ovate-pointed, or lanceolate.

Seeds very small, with a leathery covering and membranaceous wings.

Seed-leaves from five to seven in number.

Leaves deciduous, linear, obtuse, soft, without footstalks, and either produced in bundles or singly.

The name Larch, according to some authors, is derived from the Celtic word "Lar" (fat), on account of the tree producing an abundance of resinous matter, which flows externally down its stem, and which Ovid describes in the following lines—

> "The new-made trees in tears of amber run,
> Which harden into value by the sun."

But, according to other writers, the name is derived from the Welsh "Llar" (wide spreading), on account of its horizontally extended branches. Its Spanish name, "Alerce," and its Italian one, "L'Arice," are derived from the Arabic "Al-araz," a kind of cedar, or coniferous tree.

All deciduous trees, found in the colder parts of Europe, Asia, and America.

No. 1. Larix Dahurica, *Turczaninow,* the Dahurian Larch.
Syn. Larix Europæa Dahurica, *Loudon.*
„ „ Gmelini, *Ledebour.*
„ Abies Gmelini, *Ruprecht.*
„ Pinus Dahurica, *Fischer.*
„ „ Larix Americana, *Pallas.*

Leaves single, or in bundles of many together round a central bud; they are single on the leading shoots and young plants, soft, narrow, linear, blunt-pointed. spreading, recurved, and deciduous, without any footstalks, and of a bright green colour, a little glaucous when young. Branches distorted and pendulous. Cones oblong or egg-shaped, and tapering rather most towards the apex; from half to three-quarters of an inch long, erect, and not compact. Scales very small, reflexed at the margins, wavy, or slightly jagged, and not falling off when ripe; bracteas shorter than the scales, ovate, and pointed. Seeds very small, and winged.

A small tree, dwarfing down by climate to a stunted bush, or irregular-growing little tree, only a few feet high, with twisted, half-pendulous branches, thickly furnished with bundles of the leaves all round the branchlets.

It is found in Northern Siberia, on the bleak mountains of Dahuria, and in the arctic regions of Siberia, a mere little sprawling shrub, amongst the last vestiges of arborescent vegetation in those places, also in cold mountainous places, from the Ural Mountains to the Pacific Ocean.

No. 2. LARIX EUROPÆA, *DC.*, the Common Larch.
Syn. Abies Larix, *Lamarck.*
„ Larix decidua, *Miller.*
„ „ pyramidalis, *Salisbury.*
„ „ excelsa, *Link.*
„ „ vulgaris, *Fischer.*
„ „ communis, *Lawson.*
„ Pinus Larix, *Linnæus.*

Leaves in bundles, many together round a central bud, but singly on young plants and the leading shoots, deciduous, linear, soft, blunt, or rounded at the points, spreading, slightly recurved, and of a beautiful bright green. Cones of a longish oval shape, erect, of a brown colour, one inch long, and remaining for a long time on the trees. Scales persistent or not falling off, roundish, streaked, and slightly waved on the margins; bracteas generally longer than the scales, particularly towards the base of the cones. Seeds small, of an irregular oval form, with a broad wing; seed-leaves, from five to seven in number. Cones ripen late in the autumn.

A fine, deciduous, and quick-growing tree, in favourable situations attaining from 80 to 100 feet in height, and from three to four feet in diameter, with a conical head, and horizontal, spreading branches, with the branchlets pendulous, particularly in old trees.

The Common Larch is spread over Central Europe, and forms forests in the upper regions of the Alps of France and Switzerland, from east to west; its proper region is at a height of from 3000 to 6500 feet of elevation, but it sometimes occurs as high as 7000 feet of elevation; but then it is a dwarf bush or scrubby plant, while it, on the other hand, descends as low as 1500 feet, but is not found anywhere on the Apennines, according to Professor Schouw, and is less common on the northern than on the southern slope of the Alps. It is found on the Carpathian Mountains, in Tyrol and Hungary, but does not exist in the German plains, nor in the mountains of Scandinavia, nor in the Pyrenees, and is equally wanting in Greece, and in the Iberian peninsula. Those Larches found in Russia, &c., are different species.

The following are the most striking varieties of the Common Larch.

LARIX EUROPÆA PENDULA, *Loudon*, Godsall's Weeping Larch.

Syn. Larix Europæa Godsallii, *Loudon.*

A very distinct variety; on account of its very pendent branches, said to be a subvariety of the Tyrolese Larch, picked out of a seed-bed in Mr. Godsall's Nursery.

LARIX EUROPÆA REPENS, *Loudon.*

Another variety, differing from the Common Larch in having wide-spreading, robust branches, and a less aspiring stem, with all the lateral branches pendent.

LARIX EUROPÆA RUBRA, *Endlicher*.

The Red-flowered Common Larch.

LARIX EUROPÆA ALBA, *Endlicher*.

The White-flowered Common Larch.

There are other varieties to be found in nurserymen's lists, but which are of only trivial account, such as Larix Europæa *laxa*, the loose-headed Larch, the Larix Europæa *compacta*, the compact-headed Larch, and Larix Europæa, *Killermanii*, a dwarf monstrosity, with remarkably thickened branches, densely clothed with leaves.

No. 3. LARIX GRIFFITHII, *Hooker*, the Sikkim Larch.

Syn. Abies Griffithiana, *Lindley*.
„ Larix Griffithiana, *Hort.*
„ „ Sikkimensis, *Hooker*.

Leaves deciduous, and growing in scattered bundles of many together, round a central bud, or singly on the young shoots linear, narrow, and longer than those of the Common Larch; slightly glaucous when young, spreading, and of a beautiful light green, but which, in autumn, before falling off, becomes of a red colour. Cones large, oblong, cylindrical, without footstalks, blunt-pointed, erect, two inches and a half long, and one inch broad, and slightly incurved, reddish-purple when young, and abounding in tears of white resin. Scales rounded, half an inch broad, slightly uneven at the margin, and numerous. Bracteas flat, wedge-shaped, broadest near the base, and nearly as long as the scales, to which they are attached; unevenly notched on the edges, and projecting beyond the lower scales. Seeds angular, with a short but broad wing, a quarter of an inch long, and of a dull brown colour.

A tree rarely growing more than thirty or forty feet high, except on the shingly banks of Alpine streams, where it sometimes attains a height of sixty feet, and, according to Dr.

Hooker, it forms an inelegant, sprawling, branched tree, with the branches standing out awkwardly, and often drooping suddenly.

This species occurs very common in Bhotan, Sikkim, and in the valleys of Eastern Nepal, close up to the snow-line, at from 9000 to 12,000 feet of elevation, but is never found in the sub-Himalayas, and rarely occurs gregarious, or in clumps. The leaves, which redden and fall in November, are in more scattered fascicles than those of the Common Larch, and brighter green when young; cones large, reddish-purple; when young, erect, and abounding in tears of white resin.

It forms an inelegant thinly-branched tree, growing only 30 or 40 feet high, and called "Sah" by the Bhotiyas.

The timber is small, but splits well, and is used for flooring.

It was first discovered by Dr. Hooker, and named in compliment to the late Dr. Griffith.

No. 4. LARIX KAMTSCHATICA, *Carrière*, the Kamtschatka Larch.

Syn. Pinus Kamtschatica, *Endlicher*.
„ Abies Kamtschatica, *Ruprecht*.
„ „ Sibirica, *Fischer*, not *Ledebour*.
„ „ Fischerii, *Ledebour*.

This kind resembles Larix Dahurica, but has much larger cones, with the scales half an inch broad, and very differently shaped. It has been much confounded by Russian writers with Larix Dahurica, but may at once be distinguished from that kind by its much larger cones, which are one inch and a half long and one inch broad, and on long foot-stalks.

It is found in Kamtschatka, at St. Paul's and St. Peter's, varying very much in stature and appearance, according to soil and elevation, but mostly a tolerable-sized tree.

No. 5. Larix Ledebourii, *Ruprecht,* the Altaian Larch.

Syn. Larix Altaica, *Fischer.*
„ „ Pseudo-Larix, *Loddiges.*
„ „ intermedia, *Lawson.*
„ „ Archangelica, *Lawson.*
„ „ rossica, *Sabine.*
„ „ decidua rossica, *Henk.*
„ „ Sibirica, *Ledebour,* not *Fischer.*
„ „ Europæa Sibirica, *Loudon.*
„ Abies Ledebourii, *Ruprecht.*
„ Pinus Ledebourii, *Endlicher.*
„ „ Larix, *Pallas.*
„ „ Pseudo-Larix, *Steudel.*

Leaves single, or in bundles of many together round a central bud, but mostly single on the leading shoots and young plants, soft, linear, broad, and rather flat on vigorous young plants, but on older ones rather four-sided, obtuse, and with much longer and broader foliage than the Common Larch, and darker green. Branches robust, but not numerous, and pendent. Cones very small, erect, slender, and rather loose. Scales oval, with the margins entire, convex, and persistent. Seeds very small. A tall, luxuriant tree, similar to the Common Larch in appearance, but with very much smaller cones, and much longer and broader foliage, growing from 80 to 100 feet high, at elevations of from 2500 to 5000 feet, on the Altai Mountains, in Siberia.—This is the Russian or Archangel Larch of the nurseries, and the Russian name for it is "Listvennetsa" (crown of leaves).

No. 6. Larix leptolepis, *Siebold,* the Slender-scaled Japan Larch.

Syn. Larix Japonica, *Carrière.*
„ Abies nodosa ("Fusi-matu"), *Japanese.*
„ Pinus nummularia ("Kin-t'sian-soung"), *Japanese.*
„ „ leptolepis, *Endlicher.*
„ „ Larix, *Thunberg.*

Leaves linear, blunt-pointed, in bundles of many together round a central bud, but sometimes singly on the leading shoots and young plants, deciduous, soft, spreading at the points, slightly recurved, and of a beautiful light green; from three-quarters to one inch and a quarter long. Branches nearly cylindrical, smooth, yellowish-gray when young, very spreading, horizontal, and in regular whorls. Branchlets slender, mostly drooping, and thickly covered with bundles of leaves. Cones ovate, rounded, blunt at the ends, terminal and numerous on the ends of the small, short branchlets, remaining on the trees after the seed is shed for years, and about the size of those of the Common Larch. Scales numerous, alternate, thin, flat, imbricated, upper part rounded, jagged, reflected, undulated, and almost reduced to a thin membrane, of a grayish-brown colour, and drawn to a point at the base. Bracteas lanceolate, acute, very entire, membranaceous, dry, and shorter than the scales. Seeds almost three-sided, with wings four or five lines long, blunt at the ends.

This kind closely resembles the Common Larch, but differs from it in having more rounded cones, with slenderer and more numerous scales, undulated and torn on the upper margins, and in being altogether a more slender tree.

A tree 40 feet high, found on the Fakone Mountains, in the Island of Nippon, and on the Island of Jezo, in the north of Japan. It is cultivated by the Japanese in pots, which, in some instances, are priceless; hence its Japan name (Kin-t'sian-soung), Money Pine.

The Japanese call this tree "Fus-ji") buds crowned with leaves), and "Fusi Matsu" (pine full of buds), also "Rax-jo-sjo" (common deciduous fir), and the Chinese call it "Kara-mats," which also means a pine full of buds, or one with knotty branchlets.

It is found at as high an elevation as 9000 feet, on the sacred mount, Fusi-Yama, in Japan, where it becomes a mere shrub, two feet high.

No. 7. LARIX LYALLII, *Parlatore,* Mr. Lyall's Larch.

Leaves on the branchlets in bundles of from 40 to 50, erectly spreading, curved, narrow, linear, blunt-pointed, rather soft, and three-quarters of an inch long, and about a quarter of a line broad; those on the young shoots are single and much longer. Branches nearly horizontal, with the young shoots and buds densely clothed with a whitish cobweb-like wool. Buds on the branchlets oval-globose, with the perula or scaly covering very short, imbricated, and of a brownish colour, and with the margins of the scales fringed with a long, cobweb-like wool. (Full-sized cones unknown.) Young cones solitary, somewhat reflexed, sessile, oblong, blunt-pointed, and two inches long, and one inch broad. Scales numerous, loosely imbricated, somewhat cartilaginous, nearly orbicular, rounded or subemarginate at the ends, rather convex on the back, and with a ciliated or fringed margin. Bracteas elliptic, crenated on the edges, with the middle nerve prolonged into an awl-shaped point longer than the scale. Seeds small, with the wings the same length as the scales.

A pyramidal tree, growing from 36 to 45 feet high, in north-west America, on the eastern slope of the Rocky Mountains, in the Galton Range, and Cascade Mountains, at an elevation of from 6000 to 7000 feet.

This is a very remarkable species, on account of the cobweb-like wool that clothes the leaf-buds and young shoots, and the long fringe of the scales that surround the buds.

No. 8. LARIX MICROCARPA, *Lambert,* the Red American Larch.

Syn. Larix Americana rubra, *Loudon.*
„ „ Americana, *Michaux.*
„ „ tenuifolia, *Salisbury.*
„ „ Fraseri, *Curtis.*
„ Abies microcarpa, *Lindley.*
„ Pinus microcarpa, *Lambert.*
„ „ Larix rubra, *Marsh.*

Leaves deciduous, in bundles of many together, round a central bud, or singly on the young shoots, from half to three-quarters of an inch long, of a vivid grass-green, and shorter and narrower than those of the Common Larch. Branches horizontal or slightly pendulous, upper ones rather ascending. Branchlets pendulous, and, like the branches, short, numerous, and dense. Cones half an inch long, and three-eighths of an inch broad, oblong, erect, and of a red or violet colour. Scales oval, slightly incurved, distinctly striated, and entire. Seeds very small, wings short, and of a light brown colour.

A large tree, with a slender, pyramidal head, and numerous horizontal branches, which are not very long, but forming rather a close head.

It is found in North America, from Canada to Virginia, but mostly abounds in Vermont, New Hampshire, and the district of Maine, attaining a height sometimes of 100 feet, and two or three feet in diameter.

Its timber is much esteemed in America, being heavy and resinous.

No. 9. LARIX OCCIDENTALIS, *Nuttall*, the Great Western Larch.

Syn. Larix Nuttallii, *Parlatore.*
„ „ Americana brevifolia, *Carrière.*

Leaves on the branchlets in bundles of from 14 to 20, erectly spreading, stiff, narrow, linear, attenuated at the base, somewhat obtuse at the apex, of a pale green colour, and from one-half to three-fourths of an inch long, and three-fourths of a line wide. Cones small, solitary, erect, ovate-globose, and from three-fourths to an inch long, and three-fourths of an inch broad. Scales orbicular, not very numerous, loosely imbricated, subcartilaginous, somewhat truncate or emarginate at the ends, convex and shining on the back, rather, reflexed and entire on the margins, and one-third of an inch long, and about the same wide. Bracteas elliptic, denticulated on the edges, acutely pointed, and extending beyond the scales. Seeds obovate and white, with short, oblong-obtuse, pallid wings.

A splendid pyramidal tree, 150 feet high, with rather short branches, the lower ones being nearly horizontal or slightly declining, the upper ones more or less ascending, and the young shoots glabrous, and furnished with numerous round, blackish buds.

It is a native of north-west America, on the Rocky Mountains, and along the Columbia River, at an elevation of from 5000 to 6000 feet.

No. 10. LARIX PENDULA, *Salisbury*, the Black American Larch.

Syn. Abies pendula, *Lindley*.
„ Larix Americana pendula, *Loudon*.
„ „ nigra, *Hort.*
„ Pinus pendula, *Aiton*.
„ „ laricina, *Duroi*.
„ „ Larix nigra, *Marsh*.

Leaves deciduous and either in bundles of many together, or single on the young shoots, three-quarters of an inch long, and like those of the Common Larch in shape, but longer, darker in colour, and arising from short buds. Branches few, remote, long, pendulous, and in whorls. Branchlets also slender, and more pendulous than the branches. Cones ovate, rounded at the ends, erect, easily detached from the branchlets, and three-quarters of an inch long. Scales rounded, loosely imbricated, largest near the base, entire on the edges, and curved inwards. Seeds small, with short wings.

A medium-sized, straggling-headed tree, with a stem seldom more than one foot and a half in diameter, and with few branches, which are long, pendulous, and thinly furnished with branchlets.

It is found on the mountains of North America, particularly in Canada, New Jersey, Pennsylvania, and the coldest and gloomiest exposures in the mountainous tracts of Virginia, where it is called by the lumberers "Hackmatack" and "Tamarack," and Black Larch.

The wood of the Black Larch is very important to the shipbuilder in the United States, and is in every way superior to that of the Common Larch. In the British Provinces it is a flourishing tree, not unfrequently found growing on hard and dry soil, and the timber of superior quality. In the United States it is confined in its growth principally to the swampy parts of the Pine districts of the Northern States. The timber is not large, but well adapted for the top and deck framing of vessels; and for lightness, strength, and durability combined, the Hackmatack timber is unequalled in its class.

Gen. LEPIDOTHAMNUS. *Philippi.*

Flowers, diœcious or monœcious. Male catkins small, egg-shaped, and terminal.

Fruit, solitary and terminal, with few scales, the lower of which are the largest and sterile, and the upper ones the smallest and fertile.

Seeds, solitary, pitcher-shaped, naked at the top, and girded at the base by a cup.

Leaves, minute, scale-formed, convex or keeled on the back, thickened at the points, and regularly imbricated.

Name, derived from "Lepis," a scale, and "Thamnos," a shrub, the twigs of the plant being covered with minute, scale-like leaves.

A ramose shrub, with the branchlets crowded close together, found in the Province of Valdivia, and on the Cordillera Pelada, in Chili.

LEPIDOTHAMNUS FONKI, *Philippi,* Fonk's Lepidothamnus.

Leaves minute, scale-formed, convexly keeled on the back, thickened at the points, and regularly imbricated. Male catkins small, egg-shaped, and terminal; female ones solitary and terminal. Fruit with few scales, the lower of which are the largest and sterile, and the upper ones fertile. Seeds solitary, pitcher-shaped, naked at the top, and girded at the base by a cup.

A ramose shrub, with the branchlets crowded close together, found in the Province of Valdivia, and on the Cordillera Pelada, in Chili.

Gen. LIBOCEDRUS. *Endlicher.* The Incense Cedar.

Flowers, monœcious, or male and female on the same plant, but separate and terminal. Male catkins almost cylindrical; female ones solitary and globular.

Cones, oval, more or less obtuse, woody, and composed of from four to six scales, which are flat, or slightly concave on the inner face.

Scales, in opposite pairs, face to face, and not overlapping; the lower ones small and mostly abortive; the whole of them furnished with a terminal, small, incurved point below the apex, and leathery in texture.

Seeds, singly, or in twos under each scale; the upper or larger scales having each two seeds at the base, while the two lower or smaller ones are either abortive, or have but one seed each. Seeds unequally two-winged.

Seed-leaves, in twos.

Leaves, scale-formed, compressed in opposite pairs, and in four imbricated rows, the under and upper ones much the smallest.

Name, derived from "Libanos," incense, and "Cedrus," the cedar.

All large evergreen trees, found in California, Chili, and New Zealand.

No. 1. Libocedrus Chilensis, *Endlicher*, the Chilian Arbor-Vitæ.

Syn. Thuja Chilensis, *Don.*
„ „ Andina, *Pœppig.*
„ „ cuneata, *Dombey.*
„ Cupressus Chilensis, *Gillies.*
„ „ thyoides, *Pavon*, not *Linnæus.*

Leaves in pairs, opposite, compressed, blunt, glaucous at the sides, bright green at the back and edges, the lower pair being much larger than the upper ones, and keeled at the back. Branches compressed, obovate between the joints, bright green, with glaucous furrows, and thickly covered with leaves, flattened, and two-edged. Cones drooping on short foot-stalks, half an inch long, and consisting of four woody scales in opposite pairs. Scales face to face, and not overlapping, with a sharp tubercle on the outside below the apex; the two larger scales have each two seeds at their base, the two lower or smaller ones being abortive, each cone generally having four seeds, which stand erect, and with unequal-sided wings.

A fine evergreen tree, attaining a height of from 60 to 80 feet in the Andes of Chili, where it is found in cold valleys on the Southern Andes, and on the volcano of Antuco, a mountain about three degrees north of Valdivia. Pæppig states that it resembles the American Arbor-Vitæ when full grown, but is less robust, sometimes branching from the base and gaining the habit of a Cypress, but in other cases forming a conical head, with a straight trunk, clothed with rough, cracked bark of a brownish-ash colour, and scarcely more than a foot in diameter, timber yellowish, resinous, hard, and strong-scented.

It is nearly, or quite hardy in favourable situations in England.

LIBOCEDRUS CHILENSIS VIRIDIS, *Hort.*

Syn. Libocedrus excelsa, *Hort.*

This variety only differs from the species in having bright green leaves, and entirely free from the glaucous bands on the leaves and branchlets.

No. 2. LIBOCEDRUS DECURRENS, *Torrey*, the Decurrent-leaved Arbor-Vitæ.

Syn. Libocedrus Craigiana, *Low.*
„ „ gigantea, *Low.*
„ „ „ glauca, *Lawson.*
„ Thuja Nuttalliana, *Douglas.*
„ „ Craigiana, *Jeffrey.*
„ „ „ glauca, *Lawson.*
„ „ gigantea, *Hort.*, not *Nuttall.*

Leaves on the young plants awl-shaped, somewhat lanceolate, decurrent at the base, extended at the apex, and sharp-pointed, loosely imbricated in four rows, thickly set on the branchlets in opposite pairs, the outer pair or marginal ones being longest, and folded partially over the inner pair on both sides, giving the young shoots a jointed, trident-like appearance. Leaves on the adult plants very small, scale-formed, one-twelfth of an inch long, and one twenty-fourth of an inch wide, ovate, blunt-pointed, thick in texture, in close opposite pairs, rather distant along the branchlets, pale green, and shining, the marginal ones overlapping the sides, and having the appearance of being in three rows on each side. Branches rather erect, long, slender, and spreading laterally, with numerous smaller ones. Branchlets short, flattened, channelled along the sides, distantly jointed, proliferous, short, and alternate. Cones erect, solitary on the ends of the upper branchlets, oblong, tapering to the points, one inch or more long, and half an inch wide near the base, and composed of two opposite pairs of scales, with a flat one down the middle, and of a pale olive-brown colour. Scales fleshy, upper pair pressed together at the margins, and containing two seeds under each; the lower ones overlapping, much shorter and smaller, but varying very much in size, abortive, and with a double margin, having the appearance as if a thin scale had grown to the back of the others, the outer one having a raised edge all round, terminating in a thin, blunt, reflexed point. Seeds soft, somewhat angular, rounded on one side, and with the elliptic wing, measures three-quarters of an inch in length, and cover the inner face of the scale. Seed-leaves in twos.

A noble evergreen tree, with an umbrella-shaped top, and straight stem when old, growing from 40 to 140 feet high, and from three to five feet in diameter.

It is found plentiful on the north-west coast of America, along the banks of the Columbia River, and on the mountains in northern California. Hartweg found it on the hills surrounding Bear Creek, in California, a tree 130 feet high, with a trunk from 13 to 16 feet in circumference; and Jeffrey along the banks of the Scots River, growing in sandy soil, a tree 140 feet high, and five feet in diameter. It is also found on the Sierra Nevada, or Snowy Mountains, and along the Sacramento River.

It is the White Cedar of the Californians, and is frequently misnamed Thuja gigantea, as pointed out by Professor Parlatore.

No. 3. LIBOCEDRUS DONIANA, *Endlicher*, Don's New Zealand Arbor-Vitæ.

Syn. Thuja Doniana, *Hooker*.
„ Dacrydium plumosum, *Don*.

Leaves in four rows; marginal ones more or less extended at the points, acute, and clasping on both sides; while those on the upper and under surfaces are pressed flat, very much smaller, nearly round, and acute pointed, with the outer surface of the leaves clothing the under part of the branchlets of a much lighter colour, and thickly covered with a glaucous bloom, while the outward part of those on the upper side are smooth, and of a glossy green. Branches rounded, and covered, with a smooth, brownish bark. Branchlets arranged in two rows, flat, compressed, and clothed with four rows of small, imbricated leaves. Cones half an inch long, solitary, ovate, obtuse, and borne erect on the points of the short branchlets. Scales in two opposite pairs, woody, and with a solitary two-winged seed under each scale.

A tree from 30 to 70 feet high, and two or three feet in diameter; found on the northern island of New Zealand, in forests along the river Hokianga, near the Bay of Islands, also on the wooded mountains more to the north, and on the higher mountains of Nelson, at an elevation of from 4000 to 6000 feet, where it is called "Kawaka" by the natives. Timber hard, resinous, and of a beautiful reddish colour.

It is tolerably hardy in favourable situations in England.

No. 4. LIBOCEDRUS TETRAGONA, *Endlicher*, the Tetragonal Arbor-Vitæ.

Syn. Thuja tetragona, *Hooker*.
„ Juniperus uvifera, *Don*.
„ Pinus cupressoides, *Molina*.

Leaves in four rows, oval, blunt-pointed, concave, hardly two lines long, and closely adpressed, keeled on the back, much sharper towards the apex, and of a light green colour. Branches, horizontal, and irregularly scattered along the stem; branchlets, placed in two rows, spreading, four-sided, and completely covered by the leaves. Cones solitary, ovate, erect, small, and produced at the extremity of the short branchlets. Scales woody, or somewhat leathery; alternate in three pairs; the lower ones small, and mostly abortive, the whole of them furnished with a terminal, small, incurved spine near the apex.

A magnificent evergreen tree, from just below the snow line of the Andes of Patagonia, inhabiting the swampy places between the mountains. It is also found in South Chili, as far as the district of Magellan, where it becomes little more than a bush, while on the mountains in the neighbourhood of Valdivia, and on the Cordilleras, it becomes a large tree from 60 to 100 feet high, and 18 or 20 feet in circumference, with a straight stem. Timber, excellent, and very durable.

It is the "Alerze" of the Chilians, and quite hardy in the West of England.

Gen. MICROCACHRYS. *J. Hooker.* The Small-coned Tasmanian Cypress.

Flowers, diœcious, or male and female, on separate plants, the male catkins oval-oblong or cylindrical, and in clusters on the ends of the smaller branchlets; the female ones oval-obtuse, or globular, erect and terminal.

Fruit, very small, nearly globular, terminal, nodding, somewhat fleshy, bright red, and composed of numerous small scales,

Scales, spreading, loosely imbricated, oval-rhomboid, thick, rather fleshy, bright red, and from 20 to 30 in number.

Seeds, egg-shaped, solitary at the base of each scale, larger than the scales, more or less exposed, and with a thin, bony shell.

Leaves, ovate, scale-formed, very small, closely imbricated in four rows, and of a deep, glossy green colour.

Name, derived from "Mikros," small, and "cachrys," a fir cone, the cones being remarkably small.

A prostrate evergreen shrub, found common on the hills of Port Cypress, and on the top of the western mountains in Van Diemen's Land.

MICROCACHRYS TETRAGONA, *J. Hooker,* the Strawberry-fruited Tasmanian Cypress.

Syn. Arthrotaxis tetragona, *J. Hooker.*
„ Dacrydium tetragonum, *Parlatore.*
„ „ Franklinii, *Lindley* not *Hooker.*

Leaves very small, ovate, scale-formed, and closely arranged in four rows on the young branchlets; those on the more adult parts are rhomboid, keeled on the back, closely imbricated, but not adhering, and of a deep green colour. Male catkins clustered on the ends of the little branchlets oval-oblong, erect, and two lines long; the female ones are oval-obtuse or globular, erect, solitary, and terminal.

Fruit very small, but much thicker than the top of the branchlets, nearly globular, terminal, nodding, somewhat fleshy green when young, bright red when ripe, and composed of numerous spreading, imbricated scales resembling the leaves, but much larger. Scales spreading, loosely imbricated, ovate, thickened on the back, boat-shaped, acute-pointed, concave in the middle, rather fleshy, and bright red. Seeds egg-shaped, solitary at the base of each scale, more or less exposed, and covered with a thin, bony shell. Branches prostrate, branchlets very numerous, long, slender, and entirely covered with scale-formed leaves, loosely imbricated in four rows, and very like those of an Arthrotaxis, but very much smaller.

A prostrate shrub, found plentiful on the hills of Port Cypress, and on the top of the western mountains in Van Diemen's Land. It is not hardy.

Gen. NAGEIA, *Gærtner.* The Catkin-bearing Laurel.

Flowers, monœcious or diœcious.

Fruit, axillary, drupacious, about the size of a cherry, and quite round.

Receptacle, fleshy, and connected with the bracteas by the axis of the short one-fruited spike.

Seeds, with a hard thin shell.

Leaves, opposite or alternate, and many-nerved.

Seed-leaves, in twos.

Name, derived from "Na" or "Nagi," its Japanese name, and signifying catkin-bearing.

All moderate-sized trees, natives of the East Indies, Java, and Japan.

No. 1. NAGEIA BECCARII, *Gordon*, Beccari's Borneo Nagi.
Syn. Podocarpus Beccarii, *Parlatore.*

Leaves opposite or subopposite, spreading, coriaceous, oval or oval-oblong, and either acute, obtuse, or rounded at the points, very entire on the margins, many nerved, and from one to two inches long, and from half to three-fourths of an inch broad, and with short, slender, and somewhat twisted footstalks Fruit exactly globose, two-thirds of an inch in diameter, solitary at the ends of short, erect peduncles, with a thickened receptacle when ripe, and of a blackish-violet colour, covered with a glaucous bloom.

A noble tree, found in humid places at Sarawak in Borneo, and called "Caju Meddambulu" by the Malays.

It is very tender.

No. 2. NAGEIA BLUMEI, *Gordon*, Dr. Blume's Java Nagi.
Syn. Podocarpus Blumei, *Endlicher.*
„ „ agathifolia, *Blume.*
„ „ latifolia, *Blume.*

Leaves in nearly opposite pairs, elliptic, or broadly lanceolate, stiff, many-nerved, shining, leathery, and slightly twisted at the base; from three to five inches long, and from one to two inches broad on the adult plants; but longer, more pointed, and much thinner on the younger ones, and sometimes withered or sphacelate at the points. Branches spreading, cylindrical, and of a brown colour; outer and upper ones opposite, thick, rounded, jointed, and sometimes compressed at the ends. Flower buds, axillary or lateral, among the abortive leaves, and composed of a few imbricated, oval-pointed scales, keeled or boat-shaped on the back. Male catkins, in clusters of from three to seven in number on the short branchlets, sometimes but very rarely on short footstalks; from a quarter to three quarters of an inch long, thick, and of a yellowish colour; footstalks of the fruit, axillary, solitary, and opposite. Fruit globular, singly at first, but soon afterwards, on account of the deciduous nature of the floral leaves, become disposed in bunches at the extremities of the branchlets, with the outer covering thin and leathery, and the inner one brittle and bony.

A tall tree, from 70 to 80 feet high, with an ample head, full of spreading branches, found in forests on the mountains of Salak, in the Island of Java.

It is very tender.

No. 3. NAGEIA CUSPIDATA, *Gordon*, the Cuspidate-leaved Nagi.
Syn. Podocarpus cuspidata, *Endlicher*.

Leaves opposite, or sub-opposite, with those at the extremities of the branchlets, frequently alternate, and somewhat in two rows. They are elliptic, very entire, undulated on the edges, tapering to a short, stout footstalk, abruptly pointed, very seldom acute, and never mucronate, and from one and three-quarters to three inches long, and from one and a quarter to one and a half inches broad in the widest part; of a very deep green on the upper side, and light green below, marked with numerous longitudinal nerves, slightly elevated, and of a bright green colour. Branches spreading, and either alternate, or opposite, or in whorls, and frequently naked and much reduced on the adult parts by the falling of the leaves; branchlets opposite, very rarely alternate, and generally in two rows. Fruit unknown.

A small tree, growing from fifteen to twenty feet high, found growing on the island of Jezo, in Japan, and much cultivated about Jeddo.

No. 4. NAGEIA GRANDIFOLIA, *Gordon*, the Great-leaved Nagi.
Syn. Podocarpus grandifolia, *Endlicher*.

Leaves opposite, oblong, lanceolate, thick at the margins, many-nerved, and covered with stomates on both surfaces.

This species, according to Professor Endlicher, is easily distinguished from Dr. Wallich's Podocarpus latifolia, which it much resembles, by its leaves being stiffer and more than six inches long, and one inch and three quarters broad, and with the branchlets of a reddish colour, and the buds rounded and obtuse.

It is very doubtful of what country it is a native, but most probably China, or Japan, or the Mountains of India.

It is quite tender.

No. 5. NAGEIA JAPONICA, *Gærtner*, the Japan Laurel.

Syn. Podocarpus Nageia, *R. Brown.*
„ Cupressus bambusacea, *Otolanzan.*
„ Myrica Nagi, *Thunberg.*
„ Laurus julifera, *Kœmpfer.*

Leaves, in opposite pairs, but frequently alternate, elliptic, or oblong-lanceolate, attenuated at the base, and acuminate at the point; three inches long, and rather more than one inch broad in the widest part. Branches, spreading, alternate, or opposite, slender, swelling at the place of insertion, frequently pendent, and furnished with leaves in double pairs, or in threes, an inch apart between each set; of the same colour on both sides, smooth, and of a dull, purplish-green colour. Flowers, diœcious, but sometimes both kinds are on the same plant. Male catkins, in threes or fours, on a common footstalk, rising from the axil of the leaves. Fruit, solitary, very rarely produced in pairs axillary and globose; half an inch long, frequently with the peduncle curved, and when ripe, of a blackish-purple colour on the outside, covered with a glaucous powder resembling that on the common sloe; rind very thin, soft, succulent, insipid, loosely adhering, and orbicular; about the size of a cherry, quite round, smooth, and with a small top-shaped point on the apex; shell, hard, thin, and brittle, enclosing a seed covered with a reddish cuticle, and slightly bitter.

A handsome tree, growing from thirty to sixty feet high, with the stem covered with a smooth, soft, fleshy-brown bark; that on the branches being of a beautiful green, and when cut, emitting a strong balsamic odour.

It is found abundantly in China and Japan, on the mountains; particularly in the provinces of Katsuga and Jamato, on the Island of Nippon, in Japan. The Chinese call it "Tceupe" (Bamboo-like), on account of its many ribbed leaves resembling the Chinese bamboo, and the Japanese "Na" or "Nagi," a term signifying the catkin-bearing laurel. The leaves, also, very much resemble those of the Alexandrian Laurel (Ruscus racemosus) in size and general appearance.

NAGEIA JAPONICA VARIEGATA, *Gordon*, the Variegated Japan Laurel.

This fine variety has its variegated leaves variously marked, with pale yellow stripes running their whole length like a ribbon.

It is a handsome variety; first sent by Mr. Fortune, from Yeddo, in Japan, to the Royal Nursery, at Bagshot, in 1861.

No. 6. NAGEIA LATIFOLIA, *Gordon*, the Broad-leaved Nagi.

Syn. Podocarpus latifolia, *Wallich.*
„ „ zamiæfolia, *Hort. Belg.*
„ „ pinnata, *Hort.*
„ Dammara pinnata, *Parmentier.*

Leaves in opposite, or sub-opposite pairs, ovate-lanceolate, spreading, attenuated at the base, much pointed, smooth, very entire, leathery, stiff, and on short footstalks, not more than one or two lines long; they are in one or two rows, five or six inches long, and one and a quarter broad, of a bright green on the upper surface and pale beneath, with numerous longitudinal nerves, a little elevated, the larger ones being flat and furrowed. Branches, mostly short, slender, spreading, horizontal, or declining, and quite denuded of the exhausted leaves; branchlets cylindrical, and as green as the leaves, the more younger ones being covered with pale, lanceolate, loosely scattered, glaucescent leaves. Flowers monœcious, male catkins in bundles of from two to five on a common axillary peduncle, and one inch long. Female flowers few in number, axillary, solitary, opposite, or under the male ones, and supported on cylindrical footstalks about one inch long. Fruit, somewhat globose, or obliquely oval, slightly pointed, and three quarters of an inch long, with the base placed in an oblong cylindrical cup, green at first, but afterwards purple, and covered with loose-spreading, lanceolate bracts.

A middle-sized evergreen tree, from twenty to thirty feet high, found on the Mountains of Pundna, a lofty range bordering on the eastern parts of Bengal, and not far from the district of Silhet, where it is called by the natives "Soploug."

It is not hardy.

No. 7. NAGEIA MINOR, *Carrière*, the Lesser Nagi.

Syn. Podocarpus, minor *Parlatore.*

Leaves alternate, crowded on the branchlets, leathery, oblong, somewhat rounded at the ends, sessile, a little twisted at the base, few nerved, and furrowed on the under side, and from half to three quarters of an inch long, and from one and a half to two lines broad. Male catkins, oblong, two lines long, and produced in threes and fours in a spike-like fascicle on the ends of the branchlets. Fruit unknown.

An evergreen shrub or small tree, with erectly-spreading and crowded branches, found along the banks of Lake Arnaud, in New Caledonia.

It is not hardy.

No. 8. NAGEIA OVATA, *Gordon,* the Ovate-leaved Japan Nagi.

Leaves mostly in opposite pairs, but sometimes alternate, broadly egg-shaped, or rounded towards the base, and with a short, blunt, brown, marcescent point; they, however, vary very much, both in size and shape, some being oblong-lanceolate, others elliptic, while the greater part of them are more or less orbicular or broadly ovate, and from one and a half to two and a half inches long, and from one to one and a half inches broad at the widest part; of a deep glossy green above, and light green below; quite entire, flat, leathery, and marked on the under side with numerous longitudinal nerves, very slightly elevated, except towards the base of the leaf, where they are more developed, and unite in the short, but broad footstalk of the leaf. Branches alternate or opposite, spreading, rather slender, and more or less declining; lateral ones not numerous, but spreading; male catkins in fascicles on a common footstalk. Fruit unknown.

A fine evergreen bush or small tree, found in the neighbourhood of Yeddo, by Mr. Fortune, who first sent plants of it to Mr. Standish, of the Royal Nursery at Bagshot in 1861.

NAGEIA OVATA VARIEGATA, *Gordon,* the Variegated Ovate-leaved Nagi.

A handsome variety, with the leaves variously marked, some being striped with broad, others with narrow bands, of a creamy-white colour, running the whole length of the leaves like a ribbon; while other leaves are half white and half green, some again are broadly striped with green down the middle, and margined with creamy-white; but all of them differ more or less in the manner and form of variegation, all over the plant.

It was sent to the Royal Nursery at Bagshot, by Mr. Fortune, from Japan, in 1861.

Gen. PHEROSPHÆRA. *Archer.*

Flowers, diœcious, or male and female on separate plants; the male catkins are small, sub-globose, solitary and terminal; the female ones recurved, solitary, globular and terminal.

Fruit, egg-shaped, erect, and somewhat fleshy.

Scales, loosely imbricated, rather fleshy, and boat-shaped.

Seeds, oval-oblong, solitary, and covered with a bony shell.

Leaves, small, scale-formed, ovate-rhomboid, obtuse, convexly keeled on the back, ciliated on the margins, and closely imbricated in four rows.

Name derived from "Phoreo," to bear, and "Sphaira," a sphere. Catkins globular.

A very branching prostrate shrub, found along the borders of Lake St. Clair, and on the western mountains in Van Diemen's Land.

PHEROSPHÆRA HOOKERIANA, *Archer*, Dr. Hooker's Tasmanian Cypress.

Syn. Microcachrys tetragona fœmina, *J. Hooker.*

Leaves small, scale-formed, ovate-rhomboid, convexly keeled on the back, ciliated on the margins and closely imbricated in four rows. Branchlets numerous, slender, and entirely covered with the small scale-formed leaves, regularly imbricated in four rows. Flowers diœcious. Male catkins small, solitary, globose, and terminal; female ones recurved, solitary, globular and terminal. Fruit egg-shaped, erect, and rather fleshy; scales loosely imbricated, boat-shaped, and somewhat fleshy. Seeds oval-oblong, solitary, and covered with a bony shell.

A very branching, prostrate shrub, found along the borders of Lake St. Clair, and on the western mountains of Van Diemen's Land.

Gen. PHYLLOCLADUS. *Richard.* The Celery-leaved Pines.

Flowers, monœcious, or male and female separate, but on the same plant, and in close terminal clusters.

Fruit, in small, connected heads, with a fleshy disk.

Seeds, solitary, very small, half-enclosed at the base by the fleshy disk, and nut-like, with a thin shell.

Leaves, minute, scale-like bodies, on the margins of the branchlets; branchlets, leaf-like, opposite, pinnated, or fan-shaped, and feather-nerved. *Seed-leaves,* in twos.

Name derived from "phyllon," a leaf, and "klados," a branch; leaf-like branchlets.

All trees, found in New Zealand, Borneo, and Tasmania.

No. 1. PHYLLOCLADUS ALPINA, *Hooker,* Alpine Phyllocladus.

Syn. Phyllocladus trichomanoides alpina, *Parlatore.*

Leaf-formed branchlets, very small, on long footstalks, bluntly lobed, obovate, and with the lobes irregularly toothed into divisions; the upper ones very small, more bluntly lobed, and much thickened on the margins; female flowers disposed in twos or threes, in little, close, fleshy heads at the base of the leaf-like branchlets. A very small and compact little bush, somewhat resembling Phyllocladus trichomanoides, found on the mountains of Tongariro, Ruahine, and those in the neighbourhood of Nelson, in New Zealand, at an elevation of 6000 feet.

No. 2. PHYLLOCLADUS HYPOPHYLLA, *Hooker,* the Under-leaf Phyllocladus.

Leaf-formed branchlets, strictly oval-rhomboid, obliquely wedge-shaped at the base, on footstalks, and with the lobes oblong, obtuse, crenulated or toothed on the margins, and glaucous on the under side; the superior, or flower-bearing ones, are obovate, truncated, deeply emarginate or two lobed, and irregularly toothed on the edges; female flowers without foot-stalks on the last or utmost division of the leaf-formed branchlets; in small heads, very rarely of more than two or three flowers on the terminal branchlets.

A straight tree from ten to thirty feet high, found at Kini-Balu, in Borneo, at an elevation of 8000 feet, and on the Mountain Pae, near Sarawak, at an elevation of 3000 feet.

It is quite tender.

No. 3. PHYLLOCLADUS RHOMBOIDALIS, *Richard*, the Celery-topped or Adventure Bay Pine.

Syn. Phyllocladus Billardierii, *Mirbel.*
„ „ asplenifolia, *Hooker.*
„ Salisburia Billardierii, *L. C. Richard.*
„ Podocarpus asplenifolia, *Labillardier.*
„ Thalamia asplenifolia, *Sprengel.*
„ Taxus serratifolia, *Noisette.*

Leaves at first minute, scale-like appendages on the apex and margins of the leaf-like branchlets, which at length become leaves, the leaves themselves appearing to be only compressed branchlets of various shapes, some rhomboid, or oblong fan-shaped, pinnatifid, more or less divided, lobed, and all wedge-shaped at the base, closely adhering, decurrent, and with numerous fan-like nerves, the same colour and texture on both sides, and furnished in the centre with a large round rib, most elevated towards the base of the leaf, where it is drawn into a short, stout footstalk, linear-incised, or serrated round the edges, sometimes entire or bluntly lobed, and pinnatifid, with opposite lobes, somewhat pinnate on the lower part, with wing-like appendages. Branches scattered, or somewhat in whorls, ascending or spreading, regularly rounded, mostly naked on the lower part; lateral ones and branchlets vertical or alternate; branchlets greenish on both faces when young, but of a purplish brown when old and in winter; male flowers on the summit of the leaf-like branches surrounded by the scale-formed, imbricated leaves; female ones in separate clusters, small, obscure, and terminal. Fruit in connected heads, two or three together, each half enclosing in a fleshy covering a solitary seed of an oval shape, with a thin shell, and very small.

A beautiful branching tree, growing forty or fifty feet high, and from two to six feet in diameter, found on the humid mountains of Tasmania.

It is not hardy.

No. 4. PHYLLOCLADUS TRICHOMANOIDES, *Don*, the Maidenhair-like Phyllocladus.

Leaflets numerous, and pinnated in two rows, obliquely wedge-shaped, feathery-nerved, lobed, or pinnatifidly divided, with the lobes terminating very abruptly, and toothed on the edges, regularly flattened on the upper surface, furrowed, alternate, and channelled at the base, deeply divided, with the divisions somewhat two-rowed, without any footstalks and indented or crenated, but frequently a little undulated, of a green or reddish-green colour when young, but of a brilliant red or brown colour when old and in winter. Branches frequently in whorls of five, spreading and cylindrical; branchlets, leaf-like, slender, short, spreading, or deflected, and either in whorls or somewhat in two rows. Male flowers terminal, in close heads and cylindrical; female ones in small clusters and terminal. Fruit connected in small heads, two or three together. Seeds very small, oval-pointed, nut-like, solitary, and half-enclosed in a fleshy covering. Seed-leaves in twos.

A graceful tree, with a straight, cylindrical stem and spreading branches, growing sixty or seventy feet high, and three or four feet in diameter, found in the forests of Tamesin, on the northern island of New Zealand, where it is called by the natives Tanekaka, and Toa-Toa. The timber is hard and heavy, and the bark is used by the natives of New Zealand for dying their mats of a red or black colour. There is the following variety:—

PHYLLOCLADUS TRICHOMANOIDES GLAUCA, *Parlatore*.
Syn. Phyllocladus glauca, *Carrière*.

Leaf-formed branchlets, slender, and tapering to the base; of a reddish-green or rusty-brown colour on the upper surface; very finely and irregularly cut or jagged on the margins, and very like those of Phyllocladus rhomboidalis, with an angular footstalk; the more younger leaves being of a glossy green, slightly glaucous on the under side; while the adult ones are remarkable for their very white-glaucous, or almost bluish-gray colour.

It is a distinct variety, and, like the species, tender.

Gen. PICEA. *Don.* The Silver Firs.

Flowers, monœcious, or male and female on the same plant, but separate; the male catkins axillary or terminal; the female ones solitary, on very short branchlets, and cylindrical.

Cones, erect, cylindrical, or nearly so, axillary, and growing on the upper side of the branches.

Scales, deciduous, or falling off when ripe from the axile of the cone, which remains persistent on the branches.

Bracteas, dorsal, and either enclosed by or projecting beyond the scales.

Seeds, somewhat triangular, full of turpentine, two under each scale, covered with a soft tegument, and furnished with ample persistent, membranaceous wings, more or less wedge-shaped.

Seed-leaves, in fives.

Leaves, solitary, flat, pectinated more or less in two rows, persistent, and silvery below.

Name derived from "pix," pitch,—the trees producing abundance of resin.

All trees, found in Europe, Asia, North America, Mexico, and Northern Africa.

Pliny and the ancient writers originally called the Siver Fir "Abies" (which name may have been a corruption of *Albus*, the leaves of the Silver Fir being white when seen from below), but which name Linnæus afterwards changed to that of *Picea*, on account of the abundance of resinous matter produced by the tree. Again, more recently Professor Link proposed the restoration of its older name, under that of *Abies vera*; a suggestion which has been followed by nearly all the continental writers, but rejected by those in England and America; hence the reverse of names applied to the Silver Firs and Spruces on the continent, to those used in this country and America.

Section I. BRACTEATA, OR THOSE KINDS WITH THE BRACTEAS ON THE CONES NOT HIDDEN BY THE SCALES, AND EITHER PROJECTING OR REFLEXED.

No. 1. PICEA APOLLINIS, *Rauch*, the Apollo Silver Fir.
Syn. Picea. Cephalonica Apollinis, *Gordon.*
„ „ Kukunaria, *Wenderth.*
„ Abies Apollinis, *Link.*
„ „ pectinata Apollinis, *Endlicher.*
„ „ Reginæ Amaliæ, *Heldreich.*
„ „ Peloponnesiaca, *German Gardens.*
„ „ Cephalonica Arcadica, *Henk.*
„ „ „ Parnassica, *Henk.*
„ „ Panachaica, *Heldreich.*
„ Pinus Apollinis, *Antoine.*
„ „ Peloponnesiaca, *Haage.*

This kind agrees in several respects both with the common Silver Fir (Picea pectinata), with which Professor Endlicher associated it in his "Synopsis Coniferarum," and the Cephalonian Fir (Picea Cephalonica) with which I myself identified it in the "Pinetum," and with which kind it entirely agrees both in its cones and habit of growth, but differs more or less in the shape and size of its leaves, which appear to be nearly intermediate between those of the two species, some of the leaves being long, linear, flat, and more or less rounded at the ends, and of a glossy deep green above, with a slight furrow along the upper surface, and furnished with two faint hollow glaucous bands on the under side, separated by the keeled midrib, which, with the thickened but seldom reflected margins, are pale green; the larger leaves are frequently more than an inch long and one line broad, with the ends always more or less bifid or rounded, slightly glaucous beneath, and very thickly arranged on the upper side of the branchlets, on dilated footstalks, more or less twisted, while the lesser foliage, which are always on the more slender and twiggy branchlets, are lance-shaped, very acute pointed, less densely placed along the spray, more scattered round the shoots, much narrower, quite glaucous below, and seldom more than half an inch in length on the adult trees, and very similar to those of Picea Cephalonica, but both forms and all modifications from the one to the other are generally produced on the same branch; much, however, depending on the vigour or position of the branches and the age of the trees, as to the shape and size of the foliage. The male catkins are in groups, surrounding the summit of the adult shoots, and sessile, while the cones are axillary, solitary, and always erect on the upper side of the top branches, very resinous externally, and quite similar to those of Picea Cephalonica in size and shape, with the scales an inch or more wide, incurved and rounded on the upper margin, bracteas projecting beyond the scales, ear-shaped, flat, reflected, mucronate, and lacerated laterally on the edges, and with a long central reflected point.

A handsome tree, rarely exceeding 60 or 70 feet in height, and two or three feet in diameter, with an ample spreading head and smooth stem, covered with a pale yellowish brown bark, scarcely or ever having on its surface any of those blisters containing resinous matter, so commonly to be found on all the Silver Firs. It is found plentiful in many parts of Greece, forming extensive forests, at elevations varying from 1500 to 4000 feet, but more particularly in the southern parts, such as on the sacred Apollo and on the celebrated and mighty mounts called Parnassus and Olympus, where in olden times mankind went in crowds to be deluded, and giants piled up in hopes to scale heaven. It is also found in the Morea, near Tripolizza, once the Turkish capital, in central Arcadia, particularly on the eastern part of the plain, at the foot of Mount Mænalus, a region which even the ancients characterized as the "abode of winter." It is quite hardy, but, like the Mount Enos Silver Fir, suffers greatly (especially when young) from the late spring frosts, which so frequently destroy the young growth on many of our Silver Firs.

Much difference of opinion still exists among writers with respect to whether the Apollo Fir should be considered a distinct species, or only as a variety of the common Silver Fir, or Mount Enos Silver Fir. Professor Endlicher considered it as only a variety of the Picea pectinata, while Professor Link made it a distinct species, and in which opinion he has been followed by M. Carrière and some others, while I myself at first referred it to Picea Cephalonica, a kind to which it certainly is very nearly related, and frequently confounded with; but after a careful examination of ample and excellent original specimens presented to me by Professor Link, I have come to the conclusion that he is right in considering it a distinct species, especially as it is always reproduced true from seed and retains its great diversity of foliage, the larger portion of which is generally more or less linear, dense, and blunt-pointed, while the remainder is more or less dagger-shaped very acute pointed, thickly placed all round the shoots, and like those of Picea Cephalonica.

The Apollo Fir has been brought into notice by M. Heldreich, of Athens, under the name of Abies Reginæ Amaliæ, or the New Arcadian Fir, and with a statement that it was first obtained in 1856 by M. Schmidt, the Curator of the Royal Gardens at Athens, who at the time considered it new, and distinct from the Grecian, or Apollo Fir, and gave to it the name of Pinus Peloponnesiaca, but which name M. Heldreich afterwards changed to that of Abies Reginæ Amaliæ, in compliment to the Queen of Greece, a great patron of gardening.

M. Schmidt, however, had never seen the tree, nor was any one aware of its peculiarities until Messrs. Balsamaki and Origoni, two inspectors of the royal forests, reached Khrysovitsi, a village in central Arcadia, near Tripolizza, in the Morea, where, at an elevation of about 1500 feet above the sea, they discovered a whole forest of this fir, stretching in a north-westerly direction towards Alonistena, and covering Mount Rhoudia and the adjacent valleys, thus having an extent of above three leagues in length and one and a half broad. It is called by the country people "Hemeron Elaton" (tame fir), on account of the lower situations of its forests on the mountains, and the ready means for obtaining its timber for domestic purposes, while on the other hand they apply the term "Agrion Elaton" (wild fir) to the Picea Cephalonica, because of the inaccessible and lofty places where it in general grows. The inhabitants living near the large fir forests are in the habit of ringing the stems, or cutting off the heads of the more vigorous trees at about two or three feet from the ground, for the purpose of obtaining the resin which flows from the wounds and upper part of the stumps, and which stumps afterwards throw out a number of symmetrically-formed shoots, the principal ones of which eventually, if undisturbed, become leaders, and form stems frequently twenty feet high and one foot in diameter.

No. 2. PICEA BALSAMEA, *Loudon*, the Balm of Gilead Fir.
Syn. Abies balsamifera, *Michaux.*
„ „ minor, *Duhamel.*
„ „ balsamea, *Miller.*
„ Pinus balsamea, *Linnæus.*
„ Peuce balsamea, *Richard.*

Leaves solitary, entire, or emarginated at the points, irregularly two-rowed, or scattered round the leading shoots, spreading, flat, silvery beneath, and bright deep green above, three-quarters of an inch long, and thickly set on the branches. Cones cylindrical, slightly tapering to both ends, erect on the upper part of the branches, four inches long and one and a half broad, of a violet colour, and without any footstalks, scales rounded on the upper part, six-eighths of an inch broad and the same in length, entire on the exposed part, and smooth, bracteas rather short, erect, and projecting half the length of the scales, rounded in the middle and terminated with rather a long. sharp point, seeds very small, angular, soft, and only half the size of those of the common Silver Fir, with broad ample wings.

A small pyramidal tree, seldom growing more than thirty or forty feet high, even in America, and one foot in diameter.

It is found in Canada, Nova Scotia, New England, and other Northern States of America; also on the Grandfather Mountain in North Carolina.

The stem of this fir produces by incision, the Balm of Gilead or Canadian Balsam, used in medicine and the arts. There are the following varieties:—

PICEA BALSAMEA LONGIFOLIA, *Loudon.*

„ Abies balsamea longifolia, *Endlicher.*

This variety has much longer leaves, and more upright branches, and was first obtained by Messrs. Booth, of Hamburgh.

PICEA BALSAMEA VARIEGATA, *Knight.*

This variety only differs in having a portion of the leaves of a whitish colour, intermixed along with the usual green ones, and which gives the tree a variegated appearance.

No. 3. PICEA BRACHYPHYLLA, *Gordon,* the Short-leaved Silver Fir.

Syn. Abies brachyphylla, *Maximowicz,*
„ Pinus brachyphylla, *Parlatore.*

Leaves short, straight or curved, flat, stiff, linear, crowded, and turned upwards on the branchlets, enlarged at the base, rounded or subemarginate at the points, slightly furrowed along the upper side, and marked beneath on both sides of the prominent midrib with white glaucous stripes, and from one-half to one-third of an inch long, and one line broad. Cones solitary, oblong-cylindrical, obtuse at the apex, sessile and erect on the upper side of the branches, and three inches long, and one and a quarter broad. Scales broadly-reniform and resinous, with the margins rounded and entire, and one-third of an inch long, and three-fourths of an inch broad, Bracteas broad and linear below, enlarged and orbicular above. irregularly dentated on the margins, and with a short, projecting point. Seeds wedge-shaped, angular, soft, and full of turpentine, with somewhat equal-sided, persistent wings, broadest at the top.

A tall, pyramidal tree, found on the mountains of Fusiyama in Japan.

No. 4. PICEA BRACTEATA, *Loudon*, the Leafy-bracted Silver Fir.
Syn. Abies bracteata, *Hooker*.
„ Pinus bracteata, *Don*.
„ „ venusta, *Douglas*.

Leaves solitary, two-rowed, linear, tapering to both ends, alternate, flat on the upper side, entire, and sharp-pointed, from two to two and a half inches long, and rather more than one-tenth of an inch wide, bright green above, ribbed with two silvery-white lines below, crowded and scattered at the insertion on the branches, but two-rowed and extended above. Branches in whorls, spreading, slender, lower ones drooping, lesser ones bent downwards; buds composed of large, loose, elliptic, pale-yellow scales, destitute of resin, axillary, and scattered along the branches but mostly towards the points. Cones ovate, erect, on very short footstalks, four inches long, and two inches wide, in great clusters on the upper side of the top adult branches. Scales kidney-shaped, concave and rounded on the upper margin, and stipulate at the back. Bracteas wedge-shaped, three-lobed, the middle one two inches long, recurved, particularly those towards the base, which are the longest, while those towards the summit are nearly straight, much shorter, and but little changed in appearance or colour from the ordinary leaves; the lateral lobes are very short, and extend very little beyond the end of the scales. Seeds wedge-shaped, soft, and angular, with rather short, but broad, membranaceous wings.

Trunk very slender, but as straight as an arrow; with the upper third of the tree frequently only clothed with branches, and giving it the appearance of an elongated pyramid or cone.

A tall, slender tree, growing 120 feet high, but only two or three feet in diameter, first discovered by Douglas, on the mountains along the Columbia River, and afterwards by Dr. Coulter and Hartweg, on the sea range of Santa Lucia, in Upper California, at an elevation of from 2500 to 3000 feet above the sea.

It is quite hardy, but suffers very much in its young growth from late spring frosts.

No. 5. PICEA CEPHALONICA, *Loudon*, the Mount Enos Fir.
Syn. Abies Luscombeana, *Loudon*.
„ „ Cephalonica, *Loudon*.
„ Pinus Cephalonica, *Endlicher*.

Leaves solitary, rigid, flat, dagger-shaped, and standing at right angles on every side of the branches; dark, shining green above, with two silvery lines beneath, and tapering from the base to the point, which terminates in a sharp point; footstalks very short, dilated lengthwise at their juncture with the branches, equally and closely distributed all over the branches, and not two-rowed, as is commonly the case in the Silver Firs. Buds prominent, somewhat square-sided, pointed, and slightly covered with resin; branches very numerous, in regular tiers on the main stem, but branching in all directions in the lateral ones. Cones erect, straight, cylindrical, tapering a little at both ends, five or six inches long, and an inch and a half in diameter. Scales rounded on the upper part, broad and entire, wedge-shaped below; bracteas projecting beyond the scales, linear-oblong, with the lower part much attenuated, and tapering gradually into a stiff, unequally-toothed, and reflexed sharp point at the top.

A fine tree, growing upwards of 60 feet high, with a trunk nine or ten feet in circumference, and a spreading head.

Timber very hard and durable. It is called the Wild Cedar by the Greeks.

It is found on the highest mountain in Cephalonia, called Mount Enos, or the Black Mountain, at an elevation of 4000 or 5000 feet, and was first introduced into England by General Napier, when governor of Cephalonia.

It is quite hardy, but suffers greatly in its young growth by the late spring frosts.

No. 6. PICEA FIRMA, *Siebold*, the Japan Silver Fir.

Syn. Abies homolepis, *Siebold.*
„ „ firma, *Zuccarini.*
„ „ Momi, *Siebold.*
„ „ bifida, *Siebold.*

Leaves solitary, somewhat two-rowed, one inch long, very thickly placed on the shoots, linear, flat, and blunt-pointed, or sometimes deeply bifid at the ends, partially sickle-shaped, on very short footstalks, and seldom inserted exactly in lines on the branches; smooth, leathery, of a rich green above, and marked on each side of the mid-rib on the under side with two white lines. Branches in regular whorls, like the common Silver Fir, spreading, flat, and horizontal, with the smaller ones opposite, and thickly clothed with foliage; buds oval, rounded on the points, smooth, in threes, the middle one the longest, imbricated, and surrounded with numerous narrow membranaceous scales, in several close tiers, which remain at the base of the shoots, afterwards, for some years. Cones cylindrical, blunt-pointed, straight, but sometimes slightly curved, and on short footstalks, three inches long, and one inch broad, thickly covered with closely imbricated brown scales. Scales broad, wedge-shaped at the base, rounded on the upper margin, and slightly crenulated, numerous, deciduous, thin, flat, imbricated, membranaceous round the edges, and slightly toothed, thickest at the base, of a dull brown colour, and falling off the axile in the autumn after the seeds are ripe; bracteas projecting, stiff, and acute. Seeds triangular and soft, with broad wings. Seed-leaves in fives.

A tall tree, with the appearance of the common Silver Fir found, according to Dr. Siebold, on the Japan Islands of Nippon, and Jezo, and frequent in the provinces of Matsu and Dewa, at an elevation of 2000 or 3000 feet. The Japanese distinguish different varieties under the names of "To-Momi," from the north of China, and the "Jezo-Momi," or the "Nire-Momi," of Japan; this last is distinguished by its leaves sloping more towards the ends of the branches, and by the cones being much shorter. They also distinguish a kind with the ends of the leaves deeply divided (bifid); but such variations appear to be produced by elevation, climate, and soil, and are, as well as Dr. Siebold's Abies homolepis, nothing but the species altered by such circumstances. In Japan it is called "Uro-Siro" (leaves white beneath), and "Sjura-Momi" (white, or Silver Fir).

No. 7. PICEA FRASERI, *Loudon*, Fraser's Silver Fir.

Syn. Abies balsamea Fraseri, *Spach.*
„ „ Fraseri, *Lindley.*
„ Pinus Fraseri, *Pursh.*

Leaves solitary, scattered all round the shoots, or irregularly two-rowed, linear, flat, slightly emarginate, or bluntly pointed, deep-green above, silvery beneath, shorter, and more erect than those of the Balm of Gilead Fir, and denser on the branches. Cones erect, oblong egg-shaped, two inches long, and rather more than one inch broad, and singly on the upper surface of the branches. Scales orbicularly wedge-shaped, and half an inch broad; bracteas inversely heart-shaped in the upper part, sharp-pointed, half projecting beyond the scales, reflexed, or bent backwards, very broad, and in regular rows.

A small tree, growing from 15 to 20 feet high, thickly set with rather flat branches and branchlets, found on the mountains of Carolina and Pennsylvania. It is the Double Balsam Fir of the Americans.

There are the following varieties:—

PICEA FRASERI GLAUCA, *Wm. Paul,* the Glaucous Double Balsam Fir.

This is a fine, robust variety, with the leaves thickly placed all round the shoots, and of a beautiful silvery white beneath.

There are plants of this handsome variety in Mr. Wm. Paul's nursery at Waltham Cross.

PICEA FRASERI HUDSONICA, *Knight,* the Hudson's Bay Silver Fir.

Syn. Picea Fraseri Hudsonica, *Loudon.*
„ „ Hudsonica, *Hort.*
„ „ balsamea prostrata, *Knight.*
„ Abies Hudsonica, *Bosc.*
„ „ Fraseri nana, *Hort.*
„ „ balsamea prostrata, *Knight.*

This is a very dwarf variety, not growing more than three or four feet high, but forming a dense, close bush with a flat top.

It is found in the Hudson Bay Company's territory in North America.

No. 8. PICEA HOLOPHYLLA, *Gordon,* the Mandschurian Silver Fir.

Syn. Pinus holophylla, *Parlatore.*
„ Abies holophylla, *Maximowicz.*

Leaves crowded, and somewhat arranged in two rows, short, rigid, straight, or slightly curved, linear and flat, with a narrow furrow along the upper surface, and striped on both sides of the prominent keel on the under side with white, and three quarters of an inch long, and nearly one line broad; petiole dilated and a little twisted. Cones solitary, oblong-cylindrical and erect on the upper side of the branches. Scales resinous, broadly-dilated, rounded, and entire on the margins, and three quarters of an inch long and one inch wide; bracts ovate, toothed on the edges, abruptly pointed, and much longer than the scales. Seeds soft, angularly wedge-shaped, and full of turpentine. Wings somewhat quadrilateral, persistent, and of a yellowish colour.

A large tree, found at Port May, in the south-eastern part of Mandschuria, in Eastern Tartary.

No. 9. PICEA NOBILIS, *Loudon,* the Noble Silver Fir.
Syn. Pinus nobilis, *Douglas.*
„ Abies nobilis, *Lindley.*

Leaves solitary, crowded, irregularly two-rowed, mostly on the upper side of the branches; one inch and three-quarters long, flat, linear, falcate, compressed, and turned upwards, dull green above, and silvery beneath. Cones solitary on the upper part of the top branches, cylindrical, thick, and rather obtuse; six or seven inches long, and two inches and three quarters broad. Scales triangular, with the edges incurved, entire on the margin, and without the bract, one inch and a quarter long, and the same broad. Bracteas projecting, imbricated backwards, and longer than the scales; jagged round the edges on the exposed part, five-eighths of an inch long, and with a long and rather broad point or tail in the middle. Seeds small, angular, soft, and with the wings one inch and a quarter in length, and five-eighths of an inch broad in the widest part.

A noble tree, growing 200 feet high, with regular, horizontal, spreading branches, and cinnamon-coloured bark. It is found growing on the North-West Coast of North America, along the banks of the Columbia River, and on the mountains of Northern California. Mr. Jeffrey found it on the Shasta Mountains at an elevation of from 6000 to 8000 feet, a tree 200 feet high and four feet in diameter, growing in a red loamy soil.

This majestic tree, according to Douglas, forms vast forests upon the mountains of Northern California, and produces excellent timber. He says, "I spent three weeks in a forest composed of this tree, and day by day could not cease to admire it." The Indians along the Columbia River and on the north-west coast call it Tuc Tuc (Big Tree).

PICEA NOBILIS GLAUCA, *Hort.*

A splendid variety, with all the leaves of a beautiful silvery-white colour. It is in the Nursery of Mr. Richard Smith, of Worcester.

No. 10. PICEA NORDMANNIANA, *Loudon*, Professor Nordmann's Silver Fir.

Syn. Abies candicans, *Fischer.*
„ „ pectinata leioclada, *Link.*
„ „ Picea leioclada, *Lindley.*
„ „ leioclada, *Steven.*
„ „ Nordmanniana, *Link.*
„ Picea pectinata leioclada, *Hort.*
„ Pinus Picea, *Tournefort,* not *Willdenow.*
„ „ Nordmanniana, *Steven.*
„ „ orientalis, *Friwaldsky.*

Leaves solitary, in a double series, two rowed, curved upwards, nearly equal in length, flat, linear, and one inch long, with the point emarginate; deep glossy green above, and channelled below, with a glaucous white line each side of the mid-rib, equal in breadth to the keel, and thickened margins, and more or less twisted at the base. Branches, dense, and regularly disposed in whorls, the lower ones horizontal, the upper ones rising at a more acute angle. Cones, on very short footstalks, erect on the upper side of the branches, five inches long, two inches and a half in diameter, and egg-shaped, a little blunted at the ends. Scales closely adpressed, cup-shaped, very obtuse, nearly one inch and a half in breadth, and the same in the full length; somewhat recurved, smooth, entire, and falling off when the seeds are ripe. Bracteas adhering to the narrow base of the scales, but afterwards free and extending beyond the scales, getting wider by degrees from the base outwards, rarely ovate, often cordate, reflexed at the apex, and incumbent on the lower scale, with the point a line and a half long. Seeds triangular, soft, two under each scale, and ripe in September. Wings obliquely expanded and membranous, with the inner margin straight. Stem, exceedingly straight, and from eighty to a hundred feet high, and three feet in diameter, with a smooth bark when full grown.

This beautiful tree is common on the Crimean Mountains and those east of the Black Sea. Professor Nordmann, of Odessa, discovered it first on the summit of the Adshar Mountains, towards the sources of the Kur, at an elevation of 6000 feet, and M. Wittmann observed it on the southern declivity of the mountains between Cartalin and Achalzich, as far up as the Alpine regions, growing amongst a forest of Abies Orientalis, and nearly 100 feet high. The timber is good and harder than that of the celebrated Oriental Spruce.

The young shoots of this Fir are quite smooth and glossy (hence the name leioclada), and its timber is said to be much harder than that of the common Silver Fir. A truly beautiful tree, from its leaves being very silvery beneath, and the great abundance of its large, purplish strobiles, which are produced on the upper side of the branches.

It is perfectly hardy, and commences growing late in the spring.

No. 11. Picea pectinata, *Loudon*, the Common Silver Fir.

Syn. Abies taxifolia, *Desfont.*
" " vulgaris, *Poiret.*
" " Picea, *Lindley.*
" " argentea, *De Chamb.*
" " alba, *Miller.*
" " pectinata, *De Candole.*
" Picea taxifolia, *Hort.*
" Pinus Picea, *Willd.*, not *Tournefort.*
" " Abies, *Duroi.*
" " pectinata, *Lamarck.*

Leaves solitary, flat, obtuse, and two-rowed, with their points turned up; from three quarters to an inch long, stiff, and of a shining dark green above and with two lines of a silvery white on each side of the mid-rib beneath. Cones from six to seven inches long, and from one and a half to two inches broad, cylindrical, erect, on the upper side of the branches, green when young, afterwards reddish, and when ripe of a brown colour. Scales, one inch and a quarter long and the same in breadth, rounded, and thin at the margins, with a long bract fixed on the back of each, and extending beyond the scale, and terminating in a sharp flat point. Seeds soft and full of turpentine, angular, enveloped, and surmounted with a membranaceous wing, broader above than below. Seed-leaves five in number.

A lofty tree, growing from eighty to one hundred and fifty feet high, with an erect stem, regularly furnished with whorls of branches, which stand horizontal, and a trunk frequently six or eight feet in diameter.

The Common Silver Fir is found all over the Alps, from east to west, and on the Alps of Piedmont. It is principally found at an elevation of from 2000 to 4500 feet, and grows on the whole chain of the Apennines, from north to south, and on the mountains of Middle Europe, but is not found on the mountains of the North of Europe. It is also found on the Pyrenees, is common on the higher mountains of Greece, and has the following varieties:—

PICEA PECTINATA PYRAMIDALIS, *Hort*, the Pyramidal Common Silver Fir.

Syn. Abies pectinata pyramidalis, *Carrière.*
„ Picea pyramidalis, *Hort.*
„ „ taxifolia pyramidalis, *Makoy.*

The branches of this variety of the Common Silver Fir are turned upwards on the main stem, but with their ends and branchlets curved, and more or less drooping.

It has a narrow, conical head, resembling that of the Lombardy Poplar in outline, but with a drooping appearance when closely inspected. A very striking variety, of German origin.

PICEA PECTINATA FASTIGIATA, *Booth*, the Upright Common Silver Fir.

Syn. Abies pectinata stricta, *Carrière.*
„ „ Metensis, *Hort—Paris.*
„ „ pyramidalis, Metensis, *Carrière.*
„ Picea pectinata Metensis, *Hort.*
„ „ Metensis, *Hort.*

Leaves short, slender, frequently curved upwards, and much smaller than those of the species.

This singular variety originated at Metz, in France, and differs from the preceding German one in having its branches and branchlets more erect, slenderer, thinner, and much compressed, and in the full-grown trees having an erect pyramidal shape like the Lombardy Poplar.

PICEA PECTINATA NANA, *Knight.*

Syn. Picea cinerea, *Baumann.*
„ Abies pectinata prostrata, *Hort.*

A very dwarf variety, growing one or two feet high, and smaller in all its parts; of French origin.

PICEA PECTINATA PENDULA, *Godefroy.*

This differs in having all its branches and twigs drooping. It is of French origin, and curious.

PICEA PECTINATA TORTUOSA, *Booth.*

This variety has its branches and branchlets very much twisted and crooked, which gives it a very singular appearance. It is of German origin.

PICEA PECTINATA VARIEGATA, *Hort.*

This variety has some of its leaves pale straw colour, or white, intermixed on the branches and young shoots, which gives the tree a variegated appearance.

No. 12. Picea Religiosa, *Loudon*, the Sacred Silver Fir.

Syn. Abies religiosa, *Lindley.*
„ „ hirtella, *Lindley.*
„ Picea hirtella, *Loudon.*
„ Pinus hirtella, *Humboldt.*
„ „ religiosa, *Humboldt.*

Leaves solitary, from one to one inch and a half long, linear, and rather thinly set on the branches; quite entire, bluntly pointed, and rather irregularly two-rowed, flat, deep green above and silvery beneath, especially when young, but when old both sides are nearly the same colour. Branches rather slender, and when young covered with hairs; but when full-grown and old, quite smooth. Cones erect, with a short foot-stalk, roundish egg-shaped, five inches long and two and a half wide, and of a purple colour when young. Scales broad, rounded, or kidney-shaped on the upper margin, one inch and a half broad, entire, and rather thick at the margin. Bracteas longer than the scales, projecting, and reflexed backwards over the scales, very broad, short-pointed, and with an even edge. Seeds rather large, angular, and soft, with transparent wings. Seed-leaves five in number.

An elegant tree, attaining a height of 150 feet, with a smooth brown bark, and rather thin of branches.

It is found on the mountains of Mexico. Schiede found it upon the cold mountains of Orizaba, at the highest limit of arborescent vegetation. Hartweg found it in various places in Mexico between 15° and 22° of south latitude, but its chief range is about 19° of south latitude, and at an elevation of 9000 feet. He also found it on the Campanario, the highest point of the mountains of Angangueo, five or six feet in diameter, and 150 feet high.

It is the Oyamel of the Mexicans, and is largely used for decorating their churches on particular religious observances.

It is more or less tender, and has the following variety:—

PICEA RELIGIOSA GLAUCESCENS, *Gordon,* the Silver-leaved Mexican Fir.

Syn. Abies glaucescens, *Roezl.*
„ „ glauca, *Roezl.*
„ „ Tlapalcatuda, *Roezl.*

Leaves longer and more silvery on both sides than those of the Oyamel Fir, but in other respects very similar. Cones also like those of Picea religiosa, but broader, and furnished with large, reflected bracts, which are very much longer than the scales, except near the apex of the cone, where they are mostly wanting. Bracteas much longer than the scales, bent backwards, very broad, spoon-shaped, fringed round the margins, and furnished with a long, tapering point, quite entire on the edges.

A beautiful glaucous variety of the Mexican Silver Fir, found growing on the "Mont de las Cruces," in Mexico, by M. Roezl, who says the leaves are so glaucous, or silvery on each side, that, at a great distance, one would declare the trees were covered with snow, and that they are much whiter than the Cedrus Deodara, on closer inspection. The cones, when young, are of a bright green colour, whereas those of the species are deep purple.

Section II. BREVIBRACTEATA, OR THOSE KINDS WITH THE BRACTEAS SHORTER THAN THE SCALES, AND ENCLOSED.

No. 13. PICEA AMABILIS, *Loudon,* the Lovely Silver Fir.

Syn. Pinus amabilis, *Douglas.*
„ „ lasiocarpa, *Hooker.*
„ Abies amabilis, *Lindley.*
„ „ lasiocarpa, *Lindley.*

Leaves, solitary, linear, flat, entire, blunt-pointed, one inch long, irregularly and densely two-rowed, incurved on the upper side of the branches, bright green above and glaucous below. Branches irregular on the main stem; lateral ones numerous, tolerably flat, and densely covered with leaves. Cones, erect, solitary, large, ovate-cylindrical, six inches long, and two inches and a half broad, slightly tapering to both ends, and woolly when young. Scales, smooth, round, and entire, an inch and a quarter broad, and about the same long, and falling off when the cones are ripe. Bracteas very short, and concealed by the scales. Seeds, angular and soft, with membranaceous wings.

A magnificent tree, seen towering above all others in its native forests in Northern California, growing 200 feet high on the mountains east of Fraser's River, in latitude 50°. Mr. Jeffrey found it growing on the sloping sides of the mountains at an elevation of 4000 feet, with the leaves very small, dark-green above, and silvery beneath, and with the branches horizontal, short and bushy, growing 250 feet high, in a gravelly soil, and five feet in diameter, with sixty feet of the stem without branches; the bark of the young trees are covered with large blisters, filled with resinous matter.

It is called "Mareilp" by the American Indians, and is quite hardy.

No. 14. Picea Cilicica, *Rauch*, the Cilician Silver Fir.
Syn. Abies Cilicica, *Carrière.*
„ „ Tchugatskoi, *Lawson.*
„ „ Sibirica alba, *Fischer.*
„ „ Pichta alba, *Hort.*
„ „ „ Fisheri, *Loudon.*
„ „ Rinzi, *Hort.*
„ Picea Sibirica alba, *Hort.*
„ „ Pichta alba, *Hort.*
„ „ „ longifolia, *Hort.*
„ „ Rinzi, *Hort.*
„ Pinus Cilicica, *Kotschy.*
„ „ Tchugatskoi, *Fischer.*
„ „ Sibirica alba, *Fischer.*
„ „ Pichta longifolia, *Hort.*

Leaves densely and irregularly arranged in two rows, and more or less horizontally placed along the branchlets, but somewhat scattered all round the leading shoots; and from one to one inch and three quarters long, and rather more than one line broad, quite straight, linear, flat, long, and narrow, with the ends bidented, and the base twisted; of a dark shining green on the upper side, and quite glaucous below, except on the mid-rib and margins, which are of a deep green colour. Branches mostly in whorls, thickly set on the stem, from the base upwards, the lower ones being horizontal, but as they ascend the stem, they get gradually shorter and more elevated at their points; branchlets and smaller spray, slender, rather short, flat, much divided, spreading, and thickly set in two horizontal rows along the branches. Male catkins on footstalks, cylindrical, and rounded at the ends. Cones erect, from seven to eight inches long, and nearly two inches in diameter, of a cylindrical shape, rounded at the base, and obtuse at the apex, with a concave depression in the centre, and so numerous on the upper side of the top branches, as to give that part of the tree quite the appearance of a large candelabrum full of wax lights. Scales concave, closely imbricated, and of a leathery texture, from three quarters to an inch broad, and one inch deep on the exposed part, with the upper margin transversely elliptic, quite entire on the edges, and very thin. Bracteas small, strap-shaped, a little contracted at the top, crenated along the edges, and furnished with a central point, and entirely hidden by the scales. Seeds soft, full of turpentine, somewhat three-cornered, and furnished with oblique wedge-shaped wings.

A handsome tree, of a pyramidal shape, thickly furnished with vertical branches to the ground, and growing fifty feet high, and three feet in diameter, with the stem covered with a thick ashy-gray coloured bark, full of deep fissures when old.

It is found on the Taurian and Caramanian mountains in Asia Minor; M. Kotschy discovered it in one of the valleys of the Taurus, to the north-west of the great Cilician defile, called Gullah Boghos, and on the southern slope of the great mountain chain called Bulgardah, in Cilicia, at an elevation of from 3000 to 7000 feet above the sea, mostly in immense forests, or intermixed with the cedar of Lebanon. The Mongolians call it "Chadsura" (green and white), and the late Dr. Fischer considered it only a variety of the Siberian Pitch Fir (Picea Pichta), a kind which it certainly very much resembles, but differs from in having very much longer cones, and leaves more silvery beneath.

It is quite hardy, and called "Tchugatskoy" (strong-scented Fir) by the Russians.

No. 15. PICEA CONCOLOR, *Gordon*, the Concolor-leaved Silver Fir.

Syn. Pinus concolor, *Parlatore.*
„ Abies concolor, *Lindley.*

Leaves closely placed, somewhat two-rowed, and the same colour on both surfaces; they are linear, flat, leathery, and either slightly falcate or straight, more or less obtuse at the points, of a whitish colour when young, pale green when old, and from one and a half to two inches long and one line broad. Cones solitary, erect, nearly sessile, oblong, rounded at the ends, and from two inches and a quarter to two and three-quarters long, and from one inch and a quarter to one and a half broad. Scales almost horizontal, closely placed, a little turned up at the edges, transversely elliptic, with the margins rounded and nearly entire. Bracteas, shorter than the scales and hidden. Seeds soft and angularly wedge-shaped, with thin, broad, persistent, and somewhat four-sided wings.

A magnificent tree, with horizontal branches in regular whorls, found on the Santa Fé mountains, in New Mexico, by Fendler, and on the Rio de los Animos, in Southern California, by Engelmann.

No. 16. PICEA GRANDIS, *Loudon*, the Great Californian Silver Fir.

Syn. Pinus grandis, *Douglas.*

Syn. Abies grandis, *Lindley.*
„ „ Gordoniana, *Carrière.*

Leaves linear, flat, channelled above, emarginate, or with a small notch at the point, and all irregularly arranged, horizontally in double rows on each side of the branchlets, in a more or less pectinate manner, on short twisted footstalks; those forming the upper tiers on each side of the shoots are much the shortest, and little more than three quarters of an inch in length, while the majority of those comprising the under series are of various lengths, and nearly double that of the upper ones, but not broader, and all of a deep glossy green above, and with two silvery white bands below, between the mid-rib and thickened margins, both of which are of a bright green colour. Branches mostly in horizontal whorls, flat, and spreading. Branchlets glossy, smooth, rather short, compact, and placed laterally in two horizontal rows, and when young, with quite a varnished appearance. Cones erect, cylindrical, and from three and a half to four inches long, and one and a half inch broad. Scales broad transversely, crescent shaped, rounded on the exposed part, incurved at the edges, closely placed, tolerably equal in size, downy externally, deciduous when fully matured, and with the small fringed dorsal bracteas entirely hidden by the overlapping scales; seeds small, angular, soft, and with persistent wings, three quarters of an inch long. Seed-leaves five in number.

A noble tree, always found in moist valleys, growing from 150 to 200 feet high, with a brown scaly bark, and very much resembling the common Silver Fir when old, but differing in the young shoots having a glossy or polished appearance, and in its much smaller cones, with hidden dorsal bracteas.

It was first discovered in 1831, by Douglas, in Northern California, growing along the banks of rivers. Jeffrey found it on the banks of Fraser's River, from the Falls, all the way down to the ocean, but particularly on the alluvial banks of the river near Fort Langley, growing 280 feet high, five feet in diameter, and fifty feet without branches. It is also found on the banks of the river at South Umpqua, and in Vancouver's Island, and, according to Fendler, on the Rocky Mountains, but not common.

It is quite hardy, not having been in the least injured by the winter of 1860-1; but the plants suffer more or less from the late Spring frosts, as they commence growing early in the season, which is not the case with either Picea Lowiana, or amabilis.

No. 17. PICEA LOWIANA, *Gordon*, Messrs. Low's Californian Silver Fir.

Syn. Picea grandis, *Lobb*, not *Douglas*.
„ „ lasiocarpa, *Hort* not *Hooker*.
„ „ Parsonsi, *Hort*.
„ „ Lowi, *Hort*.

Leaves long, linear, flat, and quite straight, channelled above, more or less twisted at the base, rather distant and strictly arranged in two horizontal rows along the shoots, and from one and a half to two and a half inches long, and one line broad, blunt pointed, or with a slight notch in the centre, particularly those on the adult trees, and all of a dull, glaucous green above, but much paler, and with two faint glaucous bands below, between the elevated mid-rib and thickened margins. Branches in distant whorls, horizontally placed, and rather slender. Branchlets more or less opposite, quite smooth, slender, laterally placed in two horizontal rows, and of a pale yellowish colour. Cones from three and a half to five inches long, and one inch and a half broad; erect, cylindrical, and obtuse at the points, rounded at the base, of a pale brown colour, and emitting numerous transparent resinous tears externally, and very similar in shape and general appearance, but somewhat larger than those of Picea grandis. Scales broad, more or less crescent-shaped, rounded on the outer side, incurved round the margins, woolly on the exposed parts, tolerably equal in size, and deciduous when fully matured. Bracteas very minute, dorsally placed at the base of the scales; broader than long, somewhat rounded, wedge-shaped on the upper part, toothed or fringed round the edges, and with a prolonged sharp point in the centre. Seeds angular, soft, and with broad hatchet-shaped persistent wings.

A noble tree, frequently upwards of 250 feet in height, and five or six feet in diameter, found in British Columbia and Northern California, but always in valleys or along the alluvial banks of rivers.

This very distinct species appears to have been first discovered by Mr. William Lobb, who mistook it for the Picea grandis of Douglas;* an error easily accounted for, on account of the great similarity of the cones and usual habitat of the tree, both kinds being always found in damp valleys, or along the alluvial banks of rivers, and never as mountain trees.

It has been named in compliment to Messrs. Low, of the Clapton Nursery, who first introduced it from California.

It is quite hardy, never getting in the least injured by the late Spring frosts, and very distinct from Picea grandis in its pale green colour, and in the size and shape of the cones.

No. 18. PICEA MAGNIFICA, *Murray*, the Pompous Silver Fir.
Syn. Abies nobilis robusta, *Carrière.*
Picea amabilis, *Lobb* not *Douglas.*
„ „ „ robusta, *Hort.*
„ „ „ magnifica, *Hort.*

Leaves linear, narrow, blunt pointed, somewhat four-sided, gibbose, sessile, and crowded on the upper side of the branches in an incurved and upright position; but spirally arranged, thickly, all round the branchlets; and when young of a pale, glaucous green, and when old, dull green, with two pale, dotted glaucous bands beneath, and a thickened midrib on both surfaces, and one inch and a half long, and about three-quarters of a line broad. Buds scaly, blunt pointed, deep brown, and often very resinous. Branches stout, rigid, horizontal, and in regular whorls; lateral ones numerous, rather short, stiff, and spreading. Shoots and branchlets straight, deep brown, and when young covered with a downy substance. Cones erect on the upper side of the branches, nearly cylindrical, obtuse at the points, rounded at the base, light brown, and from seven to nine inches long, and from two and a half to three inches in diameter, and very similar to those of Picea amabilis, except in size. Scales crescent-shaped, and pale brown on the upper part, triangular and wedge-shaped at the base, thin, and slightly incurved round the edge of the exposed part, closely imbricated, and with a copious supply of transparent resinous matter exuding from beneath the scales; the larger scales are two inches wide, and one inch and a half deep, and deciduous when the seeds are ripe. Bracteas small, ovate-pointed, fringed round the edges, dorsally placed, and entirely hidden by the overlapping scales. Seeds angular, soft, and covered with a thin testa, and furnished with broad persistent hatchet-shaped wings, straight on the inner side.

---

* The original plant of Picea grandis, at Elvaston, raised in 1831, from Douglas's seeds, proves the identity of the true kind.

This magnificent Silver Fir is found on the Sierra Nevada, to the eastward of San Francisco, in Upper California, forming immense trees, resembling Picea Nobilis.

It is perfectly hardy, and commences growing late in the spring, and consequently never gets injured by the late spring frosts in England, as is the case with Picea Webbiana, Cephalonica, and Grandis.

No. 19. PICEA NUMIDICA, *R. Smith*, the Algerian Silver Fir.

Syn. Abies Numidica, *De Lannoy*.
" " Baborensis, *Cosson*.
" " Pinsapo Baborensis, *Carrière*.

Leaves linear, straight, spreading, flat, rather stiff, and either slightly bidented at the ends, or sometimes obtusely pointed, of unequal lengths along the branchlets, twisted at the base, and thickly and irregularly arranged in two horizontal rows on the young shoots; but they afterwards stand up, and are so numerous on the vigorous branchlets as to entirely cover them when fully grown; they are of a deep, glossy green, and slightly channelled above, with two slightly sunken glaucous white bands between the bright green keel and thickened margins on the under side, and from half an inch to an inch long, and rather more than a line wide. Branches in numerous spreading whorls, and much ramified, the upper ones somewhat ascending at the ends, the older or lower ones slightly bent downwards, rather slender, and covered with comparatively small leaves. Buds large, mostly terminal, sometimes resinous, and covered with loosely imbricated, light brown scales, which are somewhat persistent. Cones cylindrical, erect on the upper side of the two-year old branches, often four or five together, very rarely solitary, and from five to eight inches long, and from one and three-quarters to two and a quarter inches in diameter. Scales small, reniform, stipitate, very thin, and entire on the edges, of an ash-gray colour, and very deciduous. Seeds soft, irregularly three-sided, with thin, membraneous wings, rounded, and truncate at the top, and of a grayish red colour. Bracts inclosed or hidden by the scales, scariose, and of a reddish-brown colour, and nearly as large as the inner face of the scale.

It forms a very handsome, compact, conical tree, from 45 to 60 feet high, with the branches in whorls, and much ramified, and a straight stem sixteen inches in diameter, covered with an ashy gray bark slightly furrowed.

The Numidian Silver Fir is found in the same forests as the Atlas Cedar, on the top of the mountains of Babor and Kabylia (the Numidia of the Romans) in the province of Constantine in Algeria.

It is quite hardy, and very distinct from Picea Pinsapo, of which some writers make it only a variety.

No. 20. PICEA PICHTA, *Loudon*, the Pitch or Siberian Silver Fir.

Syn. Abies Pichta, *Fischer*.
„ „ Sibirica, *Ledebour*.
„ Pinus Sibirica, *Steudel*.
„ „ Pichta, *Fischer*.
„ Picea Sibirica, *Hort*.

Leaves solitary, irregularly two-rowed or scattered, and very thickly set round the branches, linear, blunt-pointed, flat, dark green, with a very slight trace of the glaucous appearance on the under side, and mostly curved upwards towards the point. Branches at first horizontal, but afterwards, as they get older, become rather pendulous at the extremities. Cones erect, cylindrical, tapering towards an obtuse end, three inches and a quarter long, and an inch and three quarters broad at the widest part, a little below the middle. Scales obovate wedge-shaped, largest and broadest near the base, rounded and entire on the margins, and quite smooth. Bracteas hidden by the scales, quite short, round, irregularly toothed, and convex externally at the edges, with a large point or tail in the middle. Seeds small, angular, soft, and with membranaceous wings nearly as large as the scales.

A middle-sized tree, with rather a dense head, growing from 30 to 50 feet high, at an elevation of from 2000 to 5000 feet, on the mountains of Siberia and the Altai, forming entire forests.

It is the "Ak-cherschal" of the Tartars, and the "Chadsura" of the Mongols, and is quite hardy, but suffers greatly from the late Spring frosts, as it commences growing very early in the season.

No. 21. PICEA PINDROW, *Loudon*, the Upright Indian Silver Fir.

Syn. Picea Herbertiana, *Madden*.
„ „ Naphtha, *Knight*.
„ Abies Pindrow, *Spach*.
„ „ Webbiana affinis, *Hort*.
„ Pinus Pindrow, *Royle*.
„ Taxus Lambertiana, *Wallich*.

Leaves solitary, flat, and at first all round the shoots, but finally disposed into two rows on the branchlets horizontally, with the upper surface of the deepest green, or almost black when fully matured, and the under one with two faint, white, silvery lines, and from an inch and a half to two inches and a half long, and rather more than one line broad, with acutely two-toothed points. Branches, in whorls, horizontal, and spreading. Branchlets opposite in two rows. Cones, erect, solitary, four inches and a half long, and three inches and a half broad, cylindrical, or elongated, flat at the ends, deep purple, smooth on the surface, and growing on the upper surface of the top branches. Scales deciduous, trapeziform, stiff and leathery, with the upper margins entire and wedge-shaped at the base. Seeds, soft, angular, full of turpentine, and ripe in October. Wings long and ample.

A noble tree, growing from 80 to 100 feet high, with flat, horizontal branches, in regular distant whorls, found abundantly in Bhotan, from 11,000 to 12,000 feet of elevation. In Kamaon it is found at from 7500 to 9000 feet of elevation, where it clothes the sources of the "Kosilla" in a forest of unusual gloom and thickness. It also grows on the easternmost range of the Himalayas, where it is called "Rayha," also on the Choor and Kedarkanta Mountains, at elevations of from 8500 to 12,000 feet, and on all other ranges of similar heights, where the trunks attain a great girth and height,—some of the trees on the Choor Mountains measuring twenty feet round at five feet from the ground, and upwards of 150 feet high, with the stem densely clothed with short, scrubby boughs, bearing little proportion in length to the height of the tree, and generally ending in a mass of flat, declining branches.

The Indian term, "Pindrow," according to Major Madden, refers to its very peculiar mode of growth, the tree being tall and cylindrical, or slightly tapering, like the Lombardy Poplar; but, according to Dr. Wilson, it is derived from the Sanscrit words, "Pind," incense, and "Roo" or "Row," to weep, from the numerous resinous tears found on the cones and other parts of the tree. It is also called "Kala-rai" (Black Fir) by the people along the snowy mountains, who also apply the term "Kala-bun" (Black Forest) to the woods where it alone grows; from the dark green of the leaves on the upper surface, giving the trees a sombre yew-like appearance at a distance, and which causes the mountaineers constantly to confound it with the

"Thooner" (Yew), and which no doubt led Dr. Wallich (who trusted too much to local names) to give to this Fir the name of Taxus Lambertiana, he not having at the time seen its cones, or even probably the living tree. Its Khasiya name is Ragha, and the Bhotiyas call it "Woomun" (purple cone).

This tree forms dense forests on all the great spurs of the Kamaon Alps, from 7500 to 9000 feet of elevation, but under proper conditions it will ascend and descend above and below these elevations, always, however, exhibiting its preference for northern and western aspects. Mr. Winterbottom found it plentiful on the Peer Punjal in Cashmere, flowering in April and May, and ripening its cones, which are of the same rich purple colour as those of Picea Webbiana, in October and November of the same year.

This tree is quite hardy, but suffers from the late Spring frosts in England, and should be planted, when young, in a northern aspect, or screened from the mid-day sun.

Timber good, but soon warps and rots if exposed to rain and sun.

PICEA PINDROW VARIEGATA, *Hort*, the variegated Indian Silver Fir.

This is a constant variety, with the leaves striped with yellow.

No. 22. PICEA PINSAPO, *Loudon*, the Pinsapo Fir.

Syn. Abies Pinsapo, *Boissier.*
„ „ Hispanica, *De Chamb.*
„ Pinus Pinsapo, *Endlicher.*

Leaves solitary, regularly and thickly disposed around the branches, short, not more than half an inch long, and placed at right angles on the branches, very stiff, sharp-pointed, flat on the upper surface, and with a central rib slightly marked on each side by two furrows, which forms the only and very superficial indication of the two silvery lines so strikingly conspicuous on the under side of the leaves in the Silver Fir tribe.

Branches regularly in whorls on the main stem, very densely clothed with laterals even to their base, and scarcely extending any wider than those branches nearer the top, giving the tree a shape rather that of a cylinder than a pyramid; the young shoots also have a cylindrical shape, on account of the leaves being so thickly placed at right angles all round the stem. Bark darker in colour and more scaly than that of the common Silver Fir. Cones erect, in great numbers on the upper part of the top branches towards their extremities, and without any foot-stalks; oval, cylindric, terminating abruptly at the top, often with a small elevated point, and from four to five inches long, and from two to two and a half inches broad. Scales rounded, entire, and broad in the exposed part of the cone, but rather wedge-shaped towards the base. Bracteas small, concealed by the scales, and never extended beyond them. Seeds angular, soft, and with membranaceous wings. Seed-leaves seven in number.

A fine tree, sixty or seventy feet high, with a dense branching head, and timber full of resin, resembling in colour and structure that of the common Silver Fir.

It is found in Spain, on the mountains between Ronda and Malaga, in Granada, and forming forests on the higher parts of the Sierra de la Nieve, at an elevation of from 4000 to 6000 feet. It abounds in all the higher mountains, particularly on the northern exposures, reaching even near the summits, where the snow lies at least four or five months in the year.

There is the following variety :—

PICEA PINSAPO VARIEGATA, *Hort.*

Syn. Abies Pinsapo variegata, *Carrière.*
,, Pinus Pinsapo variegata, *Lawson.*

This variety differs in having a portion of its leaves, and smaller shoots, of a pale yellow or straw colour, intermixed with the ordinary bright green ones.

No. 23. PICEA VEITCHII, *Hort,* Veitch's Silver Fir.
Syn. Abies Veitchii, *Lindley.*
„ Pinus selenolepis, *Parlatore.*

Leaves linear, flat, and all thickly arranged in an incurved manner on the upper side of the branchlets; obtuse or emarginate at the points, keeled, glaucous, concave, and streaked with white on the under side, and varying from six to twelve lines long, and three quarters of a line broad. Branches rather stout, with the cones from two and a quarter to two and a half inches long, and two and three quarter inches in circumference; somewhat cylindrical, blunt pointed, and erect on the upper side of the branches. Scales rounded on the upper part, flattened and half-moon shaped, with a foot-stalk below. Bracteas hidden, but even in length with the scales, wedge-shaped, and terminating in a little point or prickle. Seeds testaceous, two lines long, angular, crested, and with short acinaciform wings, having a very narrow curved crest at the base.

A fine tree, growing from 120 to 140 feet high, found on the sacred Mountain Fusi-Yama, in the province of Surunga, on the Island of Nippon, in Japan.

It looks likes a small-coned Silver Fir, but is essentially different from that or any other Silver Fir, and has been named after Mr. J. G. Veitch, a plant collector in Japan, who sent seeds of it to England in 1861.

No. 24. PICEA WEBBIANA, *Loudon,* Capt. Webb's Indian Fir.
Syn. Abies Webbiana, *Lindley.*
„ „ spectabilis, *Spach.*
„ „ densa, *Griffith.*
„ „ Chilrowensis, *Hort.*
„ Pinus striata, *Hamilton.*
„ „ spectabilis, *Lambert.*
„ „ tinctoria, *Wallich.*
„ „ Webbiana, *Wallich.*

Leaves solitary, at first scattered all round the shoots, but finally more or less arranged in two rows laterally, from one to two inches long, linear, flat, leathery, bidented on the ends, of a dark glossy green above, and furnished with two broad white bands below. Branches in regular whorls, horizontal, and spreading. Branchlets opposite, two rowed, and stout. Buds oval, covered with brown scales, and resinous. Cones solitary, erect, and of a rich purple colour, from six to seven inches long, and about two and a half broad, cylindrical, blunt-ended, full of resinous matter, and growing on the upper surface of the top branches. Scales deciduous, regularly wedge-shaped, leathery, dilated on the upper part, and quite round on the margins, regularly imbricated, and provided at the base with very short bracts, much shorter than the scales. Seeds soft, oblong, or angular. Wings thin, broad, and somewhat obovate.

A noble tree, growing from seventy to eighty feet high, with a tabular-formed head when old, found abundantly in the Himalayas, at different elevations. Its lowest limit on the southern face of the Himalayas is 10,000 feet.

The Indian Silver Fir is the most abundant one in Sikkim, and forms vast forests in Bhotan, at elevations from 11,000 to 12,000 feet.

Dr. Hooker found it in Sikkim measuring thirty feet in girth. It also forms most dense and extensive forests on the north side of the Shatool-Pass, but on the south face it does not flourish. It is called Chilrow in the Northern Himalayas, 'Oonum,' or Purple-coned Fir, and the 'Raisalla,' or King Pine, in Upper Kamaon and Nepal.

This is the Black Fir, found so abundantly by Dr. Griffith on the Bhotan Mountains, at an elevation of from 11,000 to 12,500 feet, where it forms a lofty tabular or flat-headed tree, with the foliage of the deepest green on the upper surface, but quite silvery beneath. It is called "Rai-Sulla" (fragrant Fir), and "Gobrea-Sulla" (fragrant or Indigo Fir), by the Gorkhalees, on account of an indigo or purple pigment being extracted from the young cones. On the Choor Mountains the inhabitants call it "Kilounta," which is a Sanscrit compound for end of the Pine tree, and denotes the fir-cone, so conspicuous in this species, on account of its beautiful purple or violet colour. In Kooloo, and on the Chumbra range, it is styled "Toss," and forms extensive forests, where, notwithstanding the whiteness of the under surface of its leaves, the general effect of the Himalayan Silver Fir is exceeding dark and gloomy—more even than the Indian Cypress (Cupressus torulosa), which from a distance it a good deal resembles; but still the thorough-going black Pindrow Fir, with its tall columnar outline and boughs, much less bushy or pendulous, and its longer leaves, must be pronounced the handsomest tree of the two.

Timber white, very soft, and coarse-grained, but full of clear white resin; and a beautiful dye, of a lovely violet colour, is extracted from the young cones.

It is hardy, but suffers from the late spring frosts.

Gen. PINUS. *Linnæus.* The True Pines.

Flowers, monœcious, or male and female on the same plant, but separate; the male catkins laterally placed in dense masses around the shoots in a kind of spike; the female ones solitary, or in whorls, and terminal.

Cones, more or less conical, and woody.

Scales, numerous, persistent, more or less elevated, pyramidal, swollen, and imbricated.

Seeds, oval, with a hard bony shell, and either furnished with ample wings, or wingless.

Seed-leaves, numerous.

Leaves, in sheaths of two, three, or five in number, somewhat cylindrical, or concave on one side and convex on the other, persistent, and pointed.

The name *Pinus* is by some writers derived from the Greek word "pion" (fat), in allusion to its resin or tar; the Sanscrit word "Peena" having exactly the same meaning; while others derive its origin from our own *fine*, or the Latin *finis*, as well as *pin*, in allusion to the slender leaves, which are aptly designated "needle leaves" (Nadelholz) by the Germans, and "acerosa" by botanists. Others, again, derive *Pinus* from the Celtic word "pen" a mountain, in allusion to the site where these trees grow, and state that it is wholesome to walk in such groves, where the air is impregnated with the balsamic properties of "the Pine that breathes forth fragrance from every wound;" but the dry air and soil selected by Pines are more probably at the root of the salubrity. The term Fir most probably was derived from *fire*, the wood being very combustible, Pine forests, in ancient times, being particularly subject to be destroyed by that element, generally through the carelessness of man, but not unfrequently either by lightning or the action of the sun's rays upon the dry, decayed wood of fallen trees.

All evergreen trees, found in Europe, Asia, and America, with one in Africa (P. Canariensis).

Section I. BINÆ, OR THOSE KINDS HAVING ONLY TWO LEAVES IN EACH SHEATH.

No. 1. PINUS AUSTRIACA, *Hoss.* The Austrian Pine.

Syn. Pinus nigricans, *Hoss.*
" " nigra, *Link.*
" " Laricio Austriaca, *Endlicher.*
" " nigrescens, *Hort.*
" " Laricio nigricans, *Parlatore.*

Leaves two in a sheath, slender, straight, and not wavy; dark glossy green, four or five inches long, erect when young, but spreading and curved inwards when old; outer surface half round, inner channelled, sharp-pointed, rough at the edges, and thickly set on the branches. Sheaths very short, scaly, torn at the ends, and almost disappearing when old. Branches horizontal, in regular whorls, spreading, and with the ends curved upwards; smaller ones, short, scaly, and with a grayish brown bark, regularly and deeply raised by the insertion of the leave, furrowed and shining. Buds, ovate-pointed, covered with long brown scales, fringed at the edges, and slightly resinous. Cones three inches long, one inch and a quarter broad, conical, rounded at the base, and tapering regularly to the apex, pointing horizontal, or slightly inclining downwards; of a light yellowish brown colour, with a shining surface. Scales numerous, hard, and glossy; larger ones rather more than half an inch broad, but much smaller, and less elevated towards the base, angular on the upper edge, rounded below, slightly pyramidal, with an elevated horizontal line across the centre, terminated by a blunt, dark brown scar.

A large tree, growing 120 feet high, with spreading branches, and when old a flat top.

It is found on the calcareous mountains in Lower Austria, Styria, Moravia, Corinthia, Transylvania, and in the neighbourhood of Mehadia, in Banat.

Timber strong, tough, and resinous.

PINUS AUSTRIACA VARIEGATA, *Lawson*, the Variegated Austrian Pine.

A variety having some of its leaves straw coloured, and intermixed with the ordinary green ones on the same branchlets.

No. 2. PINUS BANKSIANA, *Lambert*. Sir Joseph Banks's Pine.

Syn. Pinus Hudsonica, *Lamarck*.
„ „ rupestris, *Michaux*.
„ „ sylvestris divaricata, *Aiton*.
„ „ divaricata, *Hort*.

Leaves in twos, regularly distributed obliquely all over the branches, one inch long, spreading, rigid, robust, dull greyish green in colour, thickly set on the branches, and remaining for years. Sheaths very short, one tenth of an inch long, and rather jagged at the margin. Branches divaricate, spreading, with few laterals, long, slender, twisted in all directions, and rather flexible. Buds full of resin. Cones small, horn-shaped, very hard, curved at the point, twisted, one and a half to two inches long, widest at the base, and tapering to a point; mostly in twos, of a gray ash colour, smooth, always pointing in the same direction as the branches, and remaining on the tree for years. Scales rounded, one third of an inch wide, irregularly four-sided, and terminating in a protuberance, with a blunt point in the centre. Seeds extremely small, with little wings half an inch long.

A low, scrubby, straggling bush, or small tree, from five to ten feet high, but in good soil and a favourable situation from fifteen to twenty feet high.

It is found in the most northern parts of America; in the district of Maine, Nova Scotia, and among the rocks at Labrador; at Halifax and Hudson's Bay it disappears, except in a few straggling bushes amongst the rocks. Dr. Richardson describes it as a handsome tree in favourable situations, and Douglas found it on the higher banks of the Columbia, and in the valley of the Rocky Mountains, of considerable size.

No. 3. PINUS BOLANDERI, *Parlatore.* Bolander's Pine.

Syn. Pinus muricata, *Var. Bolander.*

Leaves in twos, thickly set on the branches, short, rigid, erectly-spreading, curved, semiterete, channelled above and deep green, with the margins slightly scabrous, and the points somewhat spiny, and from one inch and a quarter to one and a half long, and a little more than half a line broad. Branches in whorls. Cones from two to four in a whorl on the branches; the younger ones are somewhat bent downwards and subglobose, and the adult ones nearly sessile, pendulous, pressed close together round the branches, and oblong-cylindrical, somewhat obtuse, straight or slightly curved, and slightly uneven at the base, and two inches long and one inch broad. Scales quadrangularly-rhomboid, pyramidally elevated, sharply keeled transversely, convex above, with a prominent acute mucro, which is long and reflexed. Seeds small and nearly black.

A small tree from ten to fifteen feet high, found by Bolander on the mountains of Northern California, and probably only a stunted form of Pinus muricata.

No. 4. Pinus Brutia, *Tenore*, the Calabrian Cluster Pine.

Syn. Pinus conglomerata, *Græffer.*
„ „ pyrenaica, *Parlatore*, not *Loudon*, or *Cook.*
„ „ Loiseleuriana, *Carrière.*
„ „ Halepensis rotundata, *Carrière.*
„ „ turbinata, *Bosc.*

Leaves in twos, rarely in threes, from six to eight inches long, very slender, and wavy, glabrous, spreading, channelled above and convex below, serrulated on the margins, with a sharp point, and of a bright green colour. Sheaths half an inch long, of an ash colour, quite entire, and not falling off. Buds three quarters of an inch long, pointed, woolly, and free from resinous matter. Cones stalkless, generally in clusters, but sometimes singly on young trees, ovate, and smooth, two or three inches long, and flattened at the base, of a deep brown colour, and remaining on the tree for years. Scales depressed, umbilicate, and slightly concave at the apex.

A tall tree, seventy feet high, with many large spreading branches, thickly set with bright green foliage.

It is found growing, according to Professor Tenore, in Calabria, on the mountain of Aspero, at an elevation of from 2400 to 2600 feet, and resembles P. Halepensis, but is easily distinguished from that species in its cones being stalkless, and in clusters, and in the leaves being nearly double the length.

It yields excellent timber, according to Lambert.

It is quite hardy.

No. 5. Pinus contorta, *Douglas*, the Twisted-branched Pine.

Syn. Pinus M'Intoshiana, *Lawson.*
„ „ Boursieri, *Carrière.*

Leaves in twos, but sometimes in threes on the young plants, two inches long, stout, sharp-pointed, and closely placed on the shoots, rounded on the outer part, and concave or channelled on the inner face. Sheaths very short, and composed of a few loose, shrivelled, dark-brown scales, full of resinous matter. Branches horizontal, spreading, very much twisted, slender, and much resembling those of Pinus inops, or Banksiana, when old. Cones small, ovate-pointed, tapering most to the apex, clustered round the branches, from two to two inches and a half long, and from three-quarters to one inch in diameter in the widest part, nearly straight, or very slightly curved, compact, and smooth on the surface. Scales thickened at the base, tetragonal, transversely keeled, blunt-pointed, a little depressed in the centre, and furnished with a small deciduous prickle in the middle; those nearest the base being much smaller, and nearly level.

A small tree, growing not more than fifteen or twenty feet high, with a twisted, scrubby appearance, found abundantly in swampy places near the sea-coast at Cape Disappointment, and Cape Lookout, on the north-west coast of North America. It was found by the French travellers, M. Boursier and M. Riviere, in Northern California, in similar situations, a tree 30 feet high, and one foot in diameter.

It is also quite abundant on the crest and slopes of the dry subalpine ridges of the Sierra Nevada, forming the principal part of the forest there, and extending to near the snow line. The timber is coarse and tough and of little value, as it is liable to warp.

No. 6. Pinus densiflora, *Siebold*, the Dense Flowered Japan Pine.

Syn. Pinus rubra, *Siebold*, in part.
„ „ Japonica, *Antoine*.

Leaves in twos, needle-shaped, slender, straight, acute-pointed, and rough at the edges; convex on the outer part, concave on the inner one, and somewhat glaucous on both faces, and from three to five inches long. Sheaths rather short, and formed of several broad scales, fringed or jagged at the ends. Buds covered with imbricated, non-resinous scales. Branches rather long, spreading, and of an ashy-gray colour. Branchlets slender and rather smooth. Cones terminal, very numerous, and either solitary or in sub-vertical clusters, on short, stout foot-stalks, more or less pendent, and about one inch and a half long, rounded at the base, and with the upper part regularly tapering into a conical point. Scales of a linear-oblong shape, slightly thickened along the upper part, rhomboid on the exposed part, closely imbricated, small, and nearly all of an equal size; with a slender, elevated line across the middle of the lozenge-shaped termination, and a little prickle in the centre, which soon disappears. Seeds very small, with membranous wings of a rusty-brown colour, regularly striated with reddish-brown, and three times the length of the seed; seed-leaves short and mostly in sixes. It forms a tree forty feet high, with a cylindrical stem covered with a smooth bark, of an ashy-gray colour, and, according to Professor Zuccarini, is found all over Japan, but is most rare in the southern provinces, where it is generally cultivated. In the middle part of the empire it is planted in masses, and forms vast woods, along with Pinus Massoniana, which it very much resembles. In the south, near Nagasaki, only a few solitary specimens are seen, generally forty feet or more high, while in the more northern parts it is very abundant, especially on the mountain slopes to a height of from 1000 to 2000 feet of elevation. It also occurs at the bottom of valleys, and on the road from Ohosaka to Yeddo, where there are large thickets of it, and Pinus Massoniana, standing above the marshy rice-fields; the latter species is, however, more especially a valley plant, becoming a mere bush at a height of 3500 feet above the sea. The timber is of great excellence, and its resin is largely in request for the plasters and salves used by the Japanese in healing wounds and sores. In pulmonary complaints they also hold it to be a specific, and make India and China ink from the soot of both Pinus densiflora and P. Massoniana.

The Japanese call this Fir "Me-Matsu" (female Pine) on account of its producing such an abundance of its little cones on the adult trees, and which are smaller than those of Pinus sylvestris. They also name it "Aka-Matsu" (red Pine), on account of its timber being of that colour, and very similar to that of Pinus Sinensis. It is quite hardy.

No. 7. Pinus Fremontiana, *Endlicher*, Colonel Fremont's Nut Pine.

Syn. Pinus monophylla, *Torrey*.
„ „ Llaveana, with a thin shelled seed, *Hartweg*

Leaves generally in twos, but not unfrequently in threes, or singly, from one inch and a half to three inches in length, of a glaucous green, more or less curved, very stout, rigid. and ending in a spiny point. Sheaths very short, and rolled backwards on the older leaves. Seed-leaves from eight to ten, but mostly nine in number, rather long, and very stout. Branches numerous, the principal ones round the stem in whorls. Bark smooth, and of a light-brown colour. Buds small, cylindrical, and three-quarters of an inch long. Cones of a light glossy brown colour, two inches and a half long, and one inch and three-quarters broad, in the widest part, which is near the middle; each cone contains from six to seven rows of scales. Scales very thick, largest near the middle, bluntly pyramidal, slightly angular, and more or less recurved downwards, particularly the smaller ones nearest the base; they are also without any points. Seeds, wingless, oblong, or egg-shaped, half an inch long, bright yellow, more or less stained with dark brown, and the shells so thin, that it is very easily broken between the finger and thumb. Kernels very pleasant in flavour, and also nutritious, as it constitutes the principal subsistance of the Indians who live in the mountains, where it grows for nine months out of the twelve. It was first discovered by Colonel Fremont during his exploring expedition when crossing the Sierra Nevada, or Great Californian Mountains, growing upon both sides, and extending over the top of the great snowy chain for a distance of three hundred miles;

the tree seldom attains a height of more than twenty feet, or eight or ten inches in diameter, but is very branching, and has a peculiar but pleasant odour when bruised. It is perfectly hardy, for Colonel Fremont frequently found the thermometer at two degrees below zero at night, and four feet of snow, where it grew. The cones are produced in great abundance, and the seeds are gathered by the Indians for their principal winter and spring subsistence; either taken out and kept dry in their huts, or left in their natural storehouse, the cones in heaps under the trees, where they remain tolerably dry until wanted for use; the Indians are said to live upon them alone for months and months without any other kind of food.

Dr. Torrey first gave the name of Pinus monophylla to this pine, from a supposition that the leaves were mostly solitary: but Professor Endlicher, who afterwards examined more perfect specimens, found that the leaves were in twos and threes, and that the solitary leaves arose from Dr. Torrey's specimens being either gathered from young trees, or very stunted ones; he consequently altered Dr. Torrey's name of "monophylla" to that of Fremontiana, in compliment to Colonel Fremont, its first discoverer.

It is the thin-shelled edible pine of the Californians, and is an article of commerce with the Indians, when in season, under the name of "Nut Pine." It is quite hardy, but a very slow growing kind.

Mr. Jeffrey found it on Mount Jefferson, in the Cascade Range, at an elevation of 6500 feet, growing on a red sandstone soil, a tree twenty feet high, and ten inches in diameter.

No. 8. PINUS HALEPENSIS, *Aiton,* the Aleppo, or Jerusalem Pine.

Syn. Pinus Hierosolimitana, *Du Hamel.*
" " Genuensis, *Cook.*
" " Halepensis minor, *Loudon.*

Leaves in twos, but not very unfrequently in threes, of a deep green, two inches and a half to three inches long, thickly clothing the younger branches, and very slender, but never remaining longer on the branches than two years, in consequence of which the branches of old trees have a naked appearance, and the head an open, thin, and straggling aspect. Buds a quarter of an inch long, imbricated, roundish, and entirely destitute of resin. Cones pyramidal, rounded at the base, smooth, solitary, or in pairs, from two and a half to three inches long, and one inch and a half broad, inversely turned downwards, with a foot-stalk three quarters of an inch long. Scales nearly flat, from one inch and a quarter to one and a half long, and three quarters of an inch broad, and of a deep shining brown colour. Seeds middle size, with wings nearly one inch long. Seed-leaves seven in number.

A low, spreading tree, growing from twenty to thirty feet high, and ripening its cones in the autumn of the second year.

It is not found to the north of the Apennines, but is very common to the east and west of those mountains, as well as in Sicily, growing both on sands and on rocks, but better on the latter; its upper limits is 2000 feet of elevation.

It is also found in the South of France near Toulon, on the island and mainland of Dalmatia, in Greece, Syria, Spain, and Asia Minor.

This Pine is called "Peukas" by the Greeks throughout Attica, who use its resin to preserve their wine from becoming sour, and put the cones into the wine-barrels for a similar purpose.

There is the following variety :—

Pinus Halepensis Pityusa, *Steven*.

Syn. Pinus Pityusa, *Strangways*.
„ „ maritima, *Lambert*.
„ „ „ prima, *Matthiol*.
„ „ Halepensis Syriaca, *Rauch*.
„ „ „ maritima, *Loudon*.
„ „ Abschasica, *Fischer*.
„ „ Abasica, *Carrière*.

Syn. Pinus Cairica, *Don.*
„ „ Paroliniana, *Webb.*
„ „ Colchica, *Booth.*
„ „ Arabica, *Sieber.*

This variety differs from the species in having much longer and larger cones, stiffer and longer leaves, and in the tree being more compact, and growing to a much larger size.

It is found growing plentiful on the shores of Abshasia, (hence one of its names), around Pezundan, the ancient Pityus, and from which circumstance also, it received the name of Pityusa, a name given by M. Steeven, and according to whose account the tree produces leaves sometimes scarcely more than one and a half or two inches long, and very slender, while others have foliage longer and stouter than those of P. Halepensis.

It is also found growing on the Colchis Mountains, in Syria, and on the coast of Greece.

No. 9. PINUS INOPS, *Solander*, the New Jersey Pine.

Syn. Pinus Virginiana, *Miller.*
„ „ variabilis, *Lambert.*

Leaves in twos, short, rigid, and sharp-pointed, from two to two inches and a half long, bright green, and scattered equally all over the younger branches. Sheaths short, entire, and a quarter of an inch long. Branches irregularly placed on the stem, twisted, with the more slender branchlets pendulous, and the young shoots covered with a fine, violet, glaucous bloom. Buds blunt-pointed and resinous, and the stem and larger branches produce tufts of leaves or abortive shoots. Cones oblong-conical, tapering slightly to a blunt point, and drooping, from two and three quarters to three inches long, and an inch and a quarter broad, very hard, and of a glossy, yellowish brown colour, with short, thick foot-stalks, and usually solitary. Scales elevated, pyramidal, four-sided, terminating in an awl-shaped, strong, projecting prickle, pointing outwards, or slightly reflexed, and half an inch broad, and nearly all of a size. Seeds, very small, with narrow wings, rather more than half an inch long. Seed-leaves from six to eight in number.

A low tree, with a spreading top, thirty to forty feet high, with a dark-coloured bark, full of resinous matter.

It inhabits the interior of North America, and is found from New Jersey to Carolina, where the soil is poor and sandy; it is also found in Maryland, Virginia, Kentucky, and Pennsylvania, but not north of the Hudson River.

Timber of little use except for fuel.

No. 10. PINUS LARICIO, *Poiret*, the Corsican Pine.

Syn. Pinus altissima, *Banks.*
„ „ pyramidalis, *Hort.*
„ „ maritima, *Aiton* not *Lambert.*
„ „ Poiretiana, *Hort.*
„ „ Corsicana, *Hort.*
„ „ Cebenensis, *Hort.*

Leaves two in a sheath, from four to six inches long, dark green, often twisted, and rather slender for its class, and with short sheaths. Cones solitary, or in pairs, seldom more than three or four inches long, and an inch and a half broad near the base, conical, straight, or sometimes slightly curved near the points. Scales convex on the back, elliptic in their general form, scarcely angular, very slightly elevated, and of a light, yellowish-brown colour. Buds ovate, with a long, narrow point and resinous. Seed-leaves from six to eight in number.

A lofty tree, with its branches regularly in very distant whorls, from 80 to 130 feet high, very common on Mount Etna, where it forms woods at an elevation of from 4000 to 6000 feet. It also forms forest, according to Professor Tenore, on the mountains of Sila, in Calabria, but it was first discovered in Corsica, and has since been found spread over the countries of the south of Europe, in Greece, Crete, and Spain.

It forms a handsome, open, pyramidal-shaped tree, growing very rapidly, and coming to maturity in 70 or 80 years after planting; the wood is whitish, but brown near the centre, very resinous, coarse, long-grained, elastic, easily worked, and durable. There are the following varieties :—

PINUS LARICIO CALABRICA, *Delamarre*, the Calabrian Pine.
Syn. Pinus Calabrica, *Hort.*
„ „ stricta, *Hort.*

Leaves on this variety are from six to eight inches long, thickly set on the branches; and the tree attains a large size on the mountains of Sila, in Calabria.

PINUS LARICIO CARAMANICA, *Loudon*, the Caramanian Pine.
Syn. Pinus Caramaniensis, *Vilmorin.*
„ „ Heldreichii, *Christ.*
„ „ Romana, *Hort.*
„ „ Fenzlii, *Kotschy.*

This variety seldom grows more than half the height of the Corsican Pine, but has a much rounder and denser head, with very dark-green foliage, and slenderer branches, covered with a reddish-coloured bark. Buds pointed and nearly covered with a whitish resin. The cones also are larger than those of the P. Laricio.

PINUS LARICIO PYGMÆA, *Rauch*, the Dwarf Corsican Pine.
Syn. Pinus Magellensis, *Schouw.*
„ „ Laricio Montana, *Hort.*
„ „ Laricio nana, *Hort.*

A very dwarf variety, from the highest region of Mount Amaro. It has its branches lying flat on the ground, with stiff, slightly-curved leaves. Cones of a spherical form, and smaller than those of Pinus Pumilio.

PINUS LARICIO CONTORTA, *Hort*, the Twisted-branched Corsican Pine.

This differs only in having its lateral branches contorted or twisted round in different directions.

PINUS LARICIO SUBVIRIDIS, *Du Hamel*, the Green-coned Corsican Pine.

This only differs in having very pale, yellowish-green cones.

PINUS LARICIO PENDULA, *Carrière,* the Pendulous Corsican Pine.

This variety has its branches and branchlets more or less pendulous.

No. 11. PINUS MASSONIANA, *Siebold,* not *Lambert,* Mr. Masson's Japan Pine.

Syn. Pinus sylvestris, *Thunberg,* not *Linnæus.*
„ „ rubra, *Siebold,* in part.
„ „ Thunbergii, *Parlatore.*
„ „ tabulæformis, *Fortune.*

Leaves in twos, needle-shaped, stiff, straight, acute-pointed, and rough at the edges; from four to six inches long, convex on the outer side, concave on the inner one, and somewhat glaucous on both faces. Sheaths rather short, and formed of several broad scales, fringed or jagged at the ends. Buds covered with imbricated, non-resinous scales. Branches rather long, spreading, and covered with an ashy-gray bark. Branchlets rather smooth and slender. Cones solitary or sub-vertical, very numerous on old trees; from two to two and a half inches long, of a conical shape, rounded at the base, regularly tapering to the point, and on short, but somewhat reflected foot-stalks. Scales small, woody, linear-oblong, slightly thickened on the upper, or exposed part, obliquely diamond-shaped, closely imbricated, nearly all of a size, and with a slender, elevated line across the middle, having in its centre a little prickle, which soon falls off. Seeds very small, with membranous wings of a rusty-brown colour, and three times the length of the seeds. Seed-leaves rather short and in sixes.

According to Professor Zuccarini and Dr. Siebold, this tree is easily distinguished, at first sight, from Pinus densiflora, with which it is frequently found intermixed, and forming vast woods in the middle part of the island of Nippon, especially about Yeddo, but it is more or less common all over Japan, and China. It, however, is more a valley plant than Pinus densiflora, and is frequently to be found standing about the marshy rice-fields, attaining a height of 40 or 50 feet, but becoming a mere shrub at an elevation of 3500 feet, on the more exposed sides of the mountains.

The Japanese call it "Aka-matsu" (red Pine), on account of its red-coloured timber; "Kuro-matsu" (black Pine), from its sombre appearance when old; and "Wo-matsu" (male Pine), on account of the numerous clusters of male aments produced on the adult trees.

The Chinese apply the term "Kok-sung" (black Pine), on account of its dark-green appearance; and "Sjo-mats" (common Pine) from its abundance. Siebold also mentions two varieties of it as being cultivated in the gardens of Japan, one called "Siruga-matsu" (the variegated Pine), which is much cultivated on account of its singular appearance; the other the "Fitots-matsu" (single-leaved Pine), a very singular-looking variety, only found in cultivation, with the leaves in each sheath so united all their length as to appear but one leaf. Timber excellent, and of a deep-red colour.

It is quite hardy.

No. 12. PINUS MERKUSII, *Vriese*, Merkus's Pine.

Syn. Pinus Sumatrana, *Junghu.*
„ „ Finlaysoniana, *Wallich.*

Leaves in twos, needle-shaped, wavy, almost smooth on the outer part, and a little angled and rough, at the edges on the inner face, from four to six inches long on the young shoots, but more than eight inches long on the adult ones. Sheaths nearly half an inch long, composed of dark-brown, jagged scales, the outer ones soon falling off, the inner ones being persistent. Buds long, narrow, somewhat incurved, and composed of awl-shaped scales, closely adhering at the tops, whitish at the edges, deep-brown in the middle, and jagged on the ends. Branches slender, lower ones bent downwards, upper ones ascending at the ends, and spreading; male catkins nearly an inch long, in clusters, and blunt-pointed. Cones ovate, tapering to both ends, three inches long, and one inch and a half in diameter, slightly bending downwards, and on short, slender foot-stalks. Scales projecting, pyramidal, regularly recurved at the points, one inch and a quarter broad, and nearly one inch long, slightly convex at the extremities, thickest on the summit, woody, and of a dark, glossy brown colour. Seeds small, with short, narrow wings half an inch long, and a quarter of an inch broad in the middle.

A very large tree, growing 100 feet high, found on the island of Sumatra, on the mountains of Tanna-Huring and Tobah, at an elevation of from 3000 to 4000 feet above the sea. It is also found in Cochin-China, in Borneo, and probably in the other islands in the Indian Archipelago.

It is quite tender.

No. 13. PINUS MITIS, *Michaux,* the Soft-leaved or Yellow Pine.

Syn. Pinus variabilis, *Pursh.*
" " Tæda variabilis, *Michaux.*
" " echinata, *Miller,* not *Lambert.*
" " lutea, *Loddiges.*
" " Roylei, *Lindley.*
" " intermedia, *Fischer.*

Leaves in twos, but not unfrequently in threes, pale, yellowish green, rather spreading, from two to two and a half inches in length, rather broad, stiff, blunt-pointed, partially twisted, channelled on the upper surface, and light, glaucous green. Sheaths half an inch long on the young leaves, but very short on the adult ones, ragged or torn, and partially persistent. Branches spreading on the lower part of the trunk, but less divergent as they approach the head of the tree, so as to form the summit into a regular pyramid; the young shoots are of a violet glaucous colour, and the buds slightly resinous. Cones small, two and a half inches in length, and one inch broad in the middle, of a grayish brown colour, oblong-conical, slightly tapering to the base, and rather blunt-pointed, solitary, and with a short, stout foot-stalk. Scales small, half an inch wide on the larger ones, but much smaller and more numerous near the base, slightly elevated in the centre, and terminating in an irregular, four-sided, projecting, hooked point, slightly bent backwards in some, in others straight. Seeds very small, with broadish wings, rather more than half an inch in length. Seed-leaves mostly in sixes, and rather long.

A beautiful tree, growing fifty or sixty feet high, and from fifteen to eighteen inches in diameter, for nearly two-thirds of its length.

It is found in most Pine forests from New England to Georgia, but towards the north it does not extend beyond Connecticut and Massachusetts; is abundant in the lower parts of New Jersey, and still more so on the eastern shore of Maryland, in the lower parts of Virginia, and as far as Carolina, also in the Floridas, on the poorest lands, and on the Cumberland Mountains in East Tennessee.

Timber close-grained, moderately resinous, excellent, and durable.

No. 14. PINUS MUGHO, *Bauhin*, the Mugho Pine.

Syn. Pinus uncinata, *Raymond.*
„ „ sylvestris Mugho, *Bauhin.*
„ „ Mughus, *Loudon.*

Leaves two in a sheath, from one to two inches long, twisted, rather broad, stiff, not spreading, and of a dull green colour. Cones one and a half to two inches long, ovate and stalkless, growing two or three together, rather erect, with hooked scales, more fully developed on the outer side, and full of resinous matter. Branches ascending and numerous, thickly covered with foliage, and with a brownish gray bark. Wood heavy, close-grained, red, and very durable, and in favourable situations a small tree thirty feet high.

It is found on the mountains extending from the Pyrenees eastward, and the Alps of South-Western and Central Europe, and has the following varieties:—

PINUS MUGHO ROSTRATA, *Antoine,* the Beaked Mugho Pine.

Syn. Pinus uncinata, *Widdrington.*
„ „ Montana, *Baumann.*
„ „ echinata, *Hort.*
„ „ rubræflora, *Loudon.*
„ „ sanguinea, *Lapeyrouse.*

This variety differs in the scales of the cones being greatly elevated, and hooked or beaked at the points, and much larger than in the original, and is the kind described by Captain Widdrington (Cook) in his " Travels in Spain," where he discovered it on the Pyrenees, a small tree, thirty feet high.

PINUS MUGHO ROTUNDATA, *Link.*, the Round-coned Mugho Pine.

Syn. Pinus sylvestris, rotundata, *Link.*
„ „ „ brevifolia, *Link.*
„ „ „ humilis, *Link.*
„ „ Pumilio rotundata, *Hort.*
„ „ Montana, *Wahlenberg.*

This variety is found below P. Pumilio, on the Tyrol, but readily to be distinguished from it, by its upright growth, and forming a small tree with a distinct stem.

PINUS MUGHO ULIGINOSA, *Wimmer,* the Marsh Mugho Pine.

Syn. Pinus Fischeri, *Booth.*
„ „ pyramidalis, *Reuss.*
„ „ obliqua, *Sauter.*

This is the Austrian form of P. Mugho, but very much more robust in stature, forming a handsome pyramidal small tree.

PINUS MUGHO NANA, *Loudon,* the Knee Pine.

This variety never grows more than three feet high on the Styrian Alps.

No. 15. PINUS MURICATA, *D. Don,* the Bishop's Pine.

Syn. Pinus Edgariana, *Hartweg.*
„ „ Murrayana, *Balfour.*

Leaves in twos, rather thickly set on the branches, from three and a half to four inches in length on vigorous young plants, but very much shorter on old ones, very stiff, rather broad, blunt-pointed, hollow on the inner side, round on the outer, and of a deep green colour. Sheaths rather short, smooth, and not more than half an inch in length on the young leaves, and only slightly persistent on the older ones. Seed-leaves on the young plants in fives and rather short. Branches not very numerous, but tolerably stout and rather irregular. Buds below the middle size, imbricated, much pointed, and destitute of resinous matter. Cones in clusters, of from four to seven, in whorls round the stem, reddish brown when young, but changing to a gray or ash colour when old; rather pendulous, and nearly straight or very slightly incurved on the side next the branch; three inches in length, and one and a half broad near the base, which is the widest part, and tapering to rather a blunt point; the base is slightly uneven, and the cones, which are sessile, or nearly so, remain on the tree for years. Scales largest on the outer side of the cone, particularly those towards the base, where they are conical, nearly straight or slightly bent backwards, much elongated, pointed, and half an inch in length; the scales on the inner side of the cone and at the point are much the smallest, quadrangular, and nearly flat, except those near the point, which are rather more elevated than the others, with a slight ridge running across their middle, terminated by a short, straight, broad prickle in the centre; each cone contains from nine to ten rows of scales, within each of which are two very small, dark-brown seeds, with wings half an inch long.

This very distinct Pine was first discovered by Dr. Coulter, at San Luis Obispo in Upper California, to the south of Monterey, at an elevation of 3000 feet, and within ten miles of the sea-shore. It grows straight, but rather stunted, seldom exceeding forty feet in height. Mr. Hartweg found it growing on the western declivity of the mountains near Monterey, and within two miles of the sea-shore, attaining a height of from twenty to thirty feet, and with a trunk twelve inches in diameter. In this locality it was confined to a small wood half a mile square, and intermixed with and surrounded by Pinus insignis. Mr. Hartweg again met with it at a considerable distance to the south of Monterey, on the ascent to the Mission of La Purissima, where the monotony of the bare hills was only relieved by a small forest of it; the trees, however, not attaining a larger size than those found growing near Monterey. Mr. Jeffrey found it a tree forty feet high, of a conical form, on the Siskyon Mountains, at an elevation of 7500 feet, growing in moist soil, near the summit of the mountain. It was named P. Murrayana by the Oregon Committee, and P. Edgariana by Hartweg in his Journal. It is the "Obispo," or Bishop's Pine, of the Californians, and quite hardy.

No. 16. PINUS PALLASIANA, *Lambert*, the Taurian Pine,

Syn. Pinus Taurica, *Hort.*
" " Laricio Pallasiana, *Loudon.*

Leaves in twos, very long, sharp-pointed, erect, rigid, five or six inches long, and channelled above; smooth, crowded, and of a shining dark green; sheaths short, half an inch long, covered with scales torn on the margins, and white when young, but dark brown when old. Buds ovate, one inch and a quarter long, and resinous, with the sides hollow. Branches scattered irregularly along the stem, robust and curved upwards, with some of the lower ones almost equal to the trunk in size. Cones ovate-oblong, tapering to the point, without foot-stalks, often curved near the end, three or four inches long, and one inch and three-quarters broad at the widest part near the base; horizontal or curved downwards, mostly single, or in threes round the branches, and of an ash-gray colour. Scales rhomboid, half an inch broad, slightly elevated, and enlarged at the base; smooth, and terminated by a slight ridge, with a very small prickle in the centre. Seeds middle size, with broad wings.

A large pyramidal tree, seventy or eighty feet high, confined to the central regions of the Crimea, forming considerable forests on the western declivity of the lofty mountains which extend along the coast of the Black Sea.

Timber very knotty, resinous, and very durable.

It is quite hardy.

No. 17. PINUS PERSICA, *Strangways*, the Persian Pine.

Leaves in twos, twisted, rather stiff, sharp-pointed, and not spreading; dense, and tufted towards the end of the branches; of various lengths, from two to five inches long, deep green, channelled on the inner side, and convex on the outer one, with the edges rough and finely serrated, and seldom remaining longer on the tree than the second year. Branches regular, short, and rather slender, but mostly pointing upwards; the larger and older ones rather naked on the lower parts, but tufted with leaves towards the points. Buds imbricated, very thready, and free from resin. Sheaths persistent, short, one-third of an inch long, rather smooth, but shrivelled, not jagged at the ends, and guarded at the base with rather a broad lanceolate, recurved scale, or metamorphosed leaf, of a bright brown colour, although green at first. Cones ovate, tapering to a very blunt point, and rounded at the base, five inches long, and three inches across at the widest part; mostly in clusters round the stem, or principal top branches, but frequently solitary, and pointing downwards; of a dull grayish brown colour, with a hard, smooth surface, short foot-stalks, and destitute of resinous matter. Scales slightly elevated, nearly one inch broad, with the apex depressed, and hollowed in the centre. Seeds large, with broad wings one inch and a half long.

A large tree, belonging to the same section as the Aleppo Pine (P. Halepensis), introduced from the South of Persia by the Hon. W. F. Strangways.

It is perfectly hardy.

No. 18. Pinus Pinaster, *Aiton,* the Star, or Cluster Pine.

Syn. Pinus Massoniana, *Lambert,* not *Siebold.*
„ „ Nepalensis, *Royle.*
„ „ Latteri, *Madden.*
„ „ maritima, *Lamarck.*
„ „ Japonica, *Loudon.*
„ „ Chinensis, *Knight.*
„ „ Nova-Hollandica, *Loddiges.*
„ „ Nova-Zealandica, *Loddiges.*
„ „ St. Helenica, *Loudon.*
„ „ Syrtica, *Thore.*
„ „ neglecta, *Low.*

Leaves in twos, dark green, six to eight inches long, rigid, broad, and very stout, slightly serrated on the margins, and thickly set on the branches in dense whorls. Sheaths three-quarters of an inch long, imbricated, and pale yellow when young, but turning nearly black when old. Buds three-quarters of an inch long, white, woolly, imbricated, and non-resinous, with the scales turned back at the points. Cones from four to six inches long, and two inches and a half wide at the broadest part, which is below the middle, and of a light shining brown colour, and growing in clusters of from four to eight, but sometimes more in number, in a horizontal direction, and without any foot-stalks. Scales from one to one inch and a quarter in length, and three-quarters of an inch broad, terminating in an unequally four-sided pyramid, of a gray-ash colour, very hard, and with a small sharp point, more particularly on the upper part of the cone. Seeds oblong, with wings one inch and a half long, and nearly half an inch broad. Seed-leaves from seven to eight in number.

A large tree, attaining a height of from fifty to seventy feet, with the branches in regular whorls, turned up at the extremities, and thickly set with foliage at intervals of three or four inches, occasioned by the shedding of the male flowers. This species and its varieties mostly grow in the sandy plains on the lower mountains of the northern and central Apennines, the variety with shorter leaves and smaller cones (minor) prefers the lower mountains, while the larger coned and longer leaved form prefers the sandy plains, but neither is found south of the Apennines. Its highest limit is 2800 feet above the sea in Upper Italy. It is found in Spain, Portugal, Greece, and Turkey, also on the French coast of the Mediterranean, where it is employed for covering immense tracks of sand along the shore, and in the island of Brazza, on the Dalmatian coast in the Gulf of Venice. It is also found (but no doubt introduced from Europe) in China, Japan, New Holland, New Zealand, and St. Helena, and even in the North of India, where Major Madden and other travellers detected it in Nepal, and gave it the names of P. Nepalensis and P. Latteri, but there is not the slightest difference between the European and Asiatic plants.

It grows freely exposed to the sea breezes, and is one of our commonest firs, but the wood is soft, and not very durable; there are the following varieties :—

PINUS PINASTER HAMILTONII, *Tenore*, Lord Aberdeen's Pine.

Syn. Pinus Pinaster major, *Du Hamel.*
„ „ Hamiltonii, *Tenore.*
„ „ Escarena, *Hort. Soc.*
„ „ Pinaster Escarena, *Loudon.*
„ „ „ Aberdoniæ, *Loudon.*
„ „ „ altissima, *Lamarck.*

Leaves of a paler green, much broader and shorter than those of the species. Cones shorter, and more ovate. It was first pointed out to the Earl of Aberdeen, in 1825, by M. Risso, at Nice, where it is found sparingly on the mountains in that neighbourhood, and from whence seeds were obtained by his lordship. It is a very distinct and handsome variety.

PINUS PINASTER LEMONIANA, *Loudon*, Sir C. Lemon's Pine.

Syn. Pinus Lemoniana, *Bentham.*

A curious variety, differing from the species in its proliferous habit, producing its cones at the extremity of the shoots, and consequently has a stunted appearance, and becomes short-lived on poor soils.

PINUS PINASTER MINOR, *Loudon*, the Cortean Pine.

Syn. Pinus maritima minor, *Du Hamel.*
„ „ „ trocata, *Knight.*
„ „ dietritis, *Hort.*

This differs in having shorter leaves and smaller cones, and abounds on the west coast of France, also in the neighbourhood of Corte, in Corsica, where it is called "Pin de Corte." It is the "Pin de Mars," "Pin Pinsot," and "Pin à Trochet" of the French, and sometimes produces its cones in large clusters of more than one hundred in number.

This variety is distinguished by its smaller cones and taller habit of growth.

PINUS PINASTER VARIEGATA, the Variegated Cluster Pine.

This only differs in having one-third of its leaves of a pale straw colour intermixed with the green ones, but sometimes the entire shoot is composed of all white, and sometimes of all green leaves.

The Pin d'Edough of the French is also Pinus Pinaster (or a slight modification of it, probably owing to climate), with the cones more or less exuding resinous tears externally, and found abundantly in the great forest of Edough, near Bona, in Algeria.

No. 19. PINUS PINEA, *L.*, the Italian Stone Pine.

Syn. Pinus sativa, *Bauhin.*
„ „ domestica, *Matth—.*
„ „ Pinea Arctica, *Hort.*
„ „ Aracanensis, *Knight.*
„ „ Pinea Chinensis, *Knight.*
„ „ „ Americana, *Hort.*
„ „ Maderiensis, *Tenore.*

Leaves in twos, from five to eight inches long, straight, very robust, and of a deep shining green; those on the young plants consist of a glaucous single bract-like leaf, thickly set on the shoots, and without any sheaths, and from amongst which afterwards spring the true leaves. Sheaths when young, half an inch long, but afterwards become torn, and reduced to half their length. Cones from five to six inches in length, and nearly round or bluntly ovate, of a pale brownish glossy colour, very solid, and not coming to maturity before the third year. Scales large, from two to two inches and a half in length, and one inch and a half broad, with the thickened part pyramidal, and frequently six-sided, but mostly having but four ribs, from the four angles, which terminate in a blunt prickle. Seeds very large, three-quarters of an inch long, with rather broad, but very short wings. Seed-leaves from nine to ten in number.

A low tree, with a round, bushy appearance, from 15 to 20 feet high, which produces the Carpathian Balsam. It is found on the sandy coasts of Tuscany, and the States of the Church, to the west of the Apennines, on the hills of Genoa and Tuscany, frequently forming forests with the Cluster Pine (Pinus Pinaster), and is cultivated throughout the whole of Italy, from the foot of the Alps to Sicily, but is not commonly found higher than 1500 feet of elevation, except in the South of Italy, where it attains an elevation of 2000 feet. It is cultivated along all the shores of the Mediterranean, and in Greece, attains a height of 50 or 60 feet, where its seeds or nuts form an extensive article of commerce, as well as in Italy and the South of France.

It forms a very ornamental small tree, with a rounded head, so celebrated for producing the fine effect in the grounds of Italian villas. There are the following varieties:—

PINUS PINEA FRAGILIS, *Du Hamel*, the Thin-shelled Stone Pine.

Syn. Pinus Pinea Tarentina, *Manetti.*

This variety differs in no way from the species, except in having a very thin shell to the seeds, which is easily broken, and for that reason cultivated in Italy, Naples, and the South of France, where there are some very large trees to be found, under the name of the "Tarentina Pine."

PINUS PINEA CRETICA, *Loudon.*

This variety has much larger cones, and slenderer leaves, and comes from the island of Candia or Crete in the Mediterranean, where it attains a larger size than the common Stone Pine.

Cones of the Stone Pine are brought from China, under the name of the "Round-coned Chinese Pine," but they in no way differ from the European form.

No. 20. PINUS PUMILIO, *Hænke*, the Mountain Pine.

Syn. Pinus Tatarica, *Miller.*
„ „ Carpatica, *Hort.*
„ „ sylvestris Montana, *Aiton.*
„ „ Mugo humilis, *Neal.*
„ „ Sudeticus, *Ungrische.*

Leaves in twos, curved, short, stiff, somewhat twisted, thickly set on the branches, from two to two inches and a half long, with long, lacerated, woolly, white sheaths when young, but which afterwards, as they get older, become much shorter, and dark brown, or nearly black. Cones from one to one inch and a half long, and three-quarters of an inch broad near the base, two or three growing together, pendulous, of a dull brown colour, and bluntly egg-shaped. Scales about the size of those of the Scotch Fir, but not so much elevated in the centre. Branches turned upwards, and very numerous, forming a dense bush, with the bottom branches creeping on the ground, but growing, in very favourable situations, into a small tree twenty or thirty feet high, with a gray and rather smoothish bark.

This Pine is found inhabiting the mountains of Middle Europe, generally on chalk formations, on the southern slope of the Alps, towards the east (Tyrol), and beyond the limits of trees, but scarcely higher than 7500 feet, nor lower than 4000 feet of elevation, where it prefers a swampy soil. It also grows on the northern slope of the Alps, and is very common on the Carpathians, where it forms a region above the common Spruce Fir, and at great elevations it becomes stemless and a spreading bush creeping along the ground. It produces the Hungarian Balsam.

No. 21. PINUS PUNGENS, *Michaux*, the Table Mountain Pine.

Leaves in twos, from two to two inches and a half long, broad, straight, rigid, and pale, yellowish green, thickly set on the branches. Sheaths short, smooth, shrivelled, and not jagged at the margins. Branches irregular and spreading. Buds blunt-pointed, and covered with resin. Cones top-shaped, rather large, light yellowish brown, three inches and a half long, and two inches and a half broad at the base, tapering to the point, and without foot-stalks, generally in whorls round the stem and top branches, pointing horizontally, and remaining on the tree for years. Scales thick, hard, and broad at the base, elevated into a pyramid, with an incurved, strong, awl-shaped hook, exceeding a quarter of an inch in length. Seeds rather small, rough, and black, with narrow wings, nearly one inch long. Seed-leaves from six to eight in number.

A tree, with the habit of the common Scotch Fir, but with a more branchy head, growing from 40 to 50 feet high.

It is found on Table Mountain in North Carolina, one of the highest points of the Alleghanies, nearly 300 miles from the sea, and which summit it covers exclusively. Pursh only found it on the Grandfather and Table Mountains, and on the Blue Mountains on the frontiers of Virginia.

Timber of little value except for fuel.

No. 22. Pinus Pyrenaica,[*] *Lapeyrouse*, in part, the Pyreneean Pine.

Syn. Pinus penicillus, *Lapeyrouse.*
„ „ Hispanica, *Cook.*
„ „ Salzmanni, *Dunal.*
„ „ Monspeliensis, *Salzmann.*
„ „ Pseudo-Halepensis, *Denhardt.*
„ „ Halepensis-Salzmanni, *Dunal.*
„ „ Pinaster Hispanica, *Roxas.*
„ „ Laricio Pyrenaica, *Loudon.*
„ „ „ Monspeliensis, *Vilmorin.*
„ „ „ tenuifolia, *Parlatore.*

Leaves in twos, rarely in threes, long, rather fine, stiff, straight, and of a bright green colour, thickly set on the branches, and six or seven inches long, channelled on the inner sides, and sharp-pointed. Sheaths half an inch long on the young leaves, smooth, entire at the margins, and dark brown, but on the old ones very short, shrivelled, rough, jagged, and nearly black. Branches stout, of a bright orange colour, numerous, regular, spreading in all directions round the stem, and well furnished with laterals. Buds conical, with a long, tapering point, covered with downy scales, and full of resin. Cones two inches and a half long, one inch and a quarter wide, conical, tapering a little to the base, on short, slender foot-stalks, mostly solitary, and pointing horizontal. Seeds rather small, with narrow, pointed wings, three-quarters of an inch long. Scales small, half an inch wide, rounded on the outer margin, slightly elevated in the centre, with an angular line terminated in the middle with a depressed, hollow scar, but sometimes with a small prickle in the centre; those nearest the base much the smallest, flat, and hollow in the centre, while those near the apex are more angularly raised, and all of a pale-yellow colour.

---

[*] Lapeyrouse gave the name of *pyrenaica* to two different Pines. The present one, which is that of Loudon's Arboretum and all English collections, and to the Pinus Brutea, of Tenore, which is the *pyrenaica* of Parlatore and Carrière, and a kind by no means plentiful on the Pyrenees, whereas the present one forms vast forests in those regions.

A majestic tree, growing from sixty to eighty feet high, regularly furnished with branches to the ground, and mostly growing intermixed with other kinds in the extensive forests of Spain and France.

It is found occupying the highest range of the extensive forests in the South of Spain, and in a corresponding situation in the vast forest region on the River Gabriel, in Upper Aragon, and on the Pyrenees, where it is called "Pin Nazaron." It is also found near Montpelier and the coast of the Mediterranean, in elevated positions, and attaining a great size, but not very plentiful.

This kind is easily distinguished by the bright orange coloured bark of the shoots.

No. 23. PINUS RESINOSA, *Solander*, the Resinous or Red American Pine.

Syn. Pinus rubra, *Michaux*.
„ „ Canadensis bifolia, *Duhamel*.

Leaves in twos, five or six inches long, straight, stiff, yellowish-green, thickly set on the shoots, compressed, and collected in bunches at the extremities of the branches. Sheaths nearly one inch long, white on the young leaves, but shorter, jagged, and darker with age on the older ones. Branches in whorls, rather naked, straight, open, and reddish-brown, with the larger ones on the trunk more distant than those of the Corsican Pine (P. Laricio). Buds long, pointed, and very resinous. Cones pale reddish-brown, shining, hard, ovate-conical, rounded at the base, two inches long, one inch and a quarter broad, and with very short foot-stalks. Scales rhomboid, largest in the middle of the cone, slightly elevated or pyramidal, with a transverse ridge, terminated by a blunt scar, unarmed in the centre, and half an inch wide, but much smaller towards the base, and more elevated. Seeds small, with the wings three-quarters of an inch long.

A large tree, growing seventy or eighty feet high, and two feet in diameter, in dry, sandy soil, with the branches in very distant whorls like those of the Corsican Pine.

It is found occupying small tracts near the Lake of St. John, in Canada, and not extending farther south than Wilksborough, in Pennsylvania; it is very scarce in all the country south of the River Hudson, but is abundant in Nova Scotia, on dry, sandy soil, and along the banks of the Genessee, in the State of New York.

Timber fine-grained, red, full of resin, and highly esteemed in Canada for its strength and durability.

No. 24. Pinus sylvestris,* *L.*, the Scotch Fir.

Syn. Pinus sylvestris vulgaris, *Clusius.*
„ „ „ Genevensis, *Bauhin.*
„ „ „ Rigensis, *Fischer.*
„ „ „ Haguenensis, *Loudon.*
„ „ „ uncinata, *Don.*
„ „ „ scariosa, *Loddiges.*
„ „ „ squamosa, *Bosc.*
„ „ „ Escarena, *Pinetum Woburnense.*

Leaves in pairs, rigid, from one inch and a half to two inches and a half in length, somewhat waved and twisted; slightly concave on the upper, and convex on the under surface, of a light bluish-green or grayish colour; finely serrated on the edges. Sheaths jagged and slightly ringed. Cones from two to three inches long, and from one to one inch and a quarter broad at the base. Scales from one to one inch and a quarter long, terminating in an irregular four-sided, projecting point, often recurved. Seeds with the wing from one to one inch and a quarter long. Seed-leaves from five to seven in number.

A tall tree, from 60 to 100 feet high, found in various parts of Europe, ripening its cones in November, or in about eighteen months from the time of flowering, which is in March. It occurs frequently in Italy, on the southern slope of the Alps, from Frioul to Nice, especially in the sandy soil of the valleys; it is also found in the northern Apennines. Its upper limit on the southern slope of the Alps is at 5000 or 6000 feet of elevation, while on the northern slope it is not found higher than 4000 feet, and as a general rule it cannot be said to exist lower than 2000 feet above the sea. It is found in Scandinavia, its northern limit, in lat. 70°, where it constitutes immense forests of fine timber; it also grows wild in Scotland, in the Sandy Plains of the North of Germany, in the mountains of Central Europe, and in the valley of the Rhine, the Tyrol, Bavaria, and towards the west it is found as far as the Pyrenees; and varieties are even found in Persia and the Caucasus, but not in North America, as stated by some writers. It is like all species of trees which have an extensive geographical range, and grow on almost every kind of soil, and at great elevations as well as in the plains; the varieties are very numerous as regards their exterior appearance, for on poor soil and very elevated situations, fully exposed to the boisterous winds, it becomes a diminutive shrub, while in lower and more favourable situations it becomes a lofty timber tree, growing 100 feet high, and four feet in diameter.

---

* The Pinus sylvestris of the ancient Roman naturalists is our Pinaster, our Pinus sylvestris being their Pityida. By simply Pinus they always intended Pinus Pinea, or the Stone Pine.

The following are the principal varieties worth distinguishing:

PINUS SYLVESTRIS HORIZONTALIS, *Don*, the Highland Pine.
Syn. Pinus sylvestris Montana, *Hort.*
" " " rubra, *Grigor.*
" " Scotica, *Willdenow.*

It is also called the Red Scotch Pine, from the colour of the wood; the Highland Pine, the Spayside Pine, and the Horizontal Scotch Fir.

This variety has its branches disposed in quite a horizontal direction from the stem of the tree. The leaves are broader and much more glaucous, with the bark on the trunk of the tree not so rugged. Its cones are thicker, and not so much pointed; and the tree is more hardy when young, and grows freely in almost any kind of soil.

PINUS SYLVESTRIS MONOPHYLLA, *Hodgins*, the One-leaved Scotch Fir.

The leaves of this variety are attached to each other throughout their length, and have the appearance of being united, but by giving them a twist they separate into two, like the ordinary Scotch Fir. It is a very singular variety.

PINUS SYLVESTRIS VARIEGATA, *Hort.*, the Variegated Scotch Fir.

This only differs from the ordinary form, in the mixture of its pale straw-coloured with the usual glaucous or bluish-green leaves, being produced on both old and young wood.

PINUS SYLVESTRIS NANA, *Hort.*, the Pigmy Scotch Fir.
Syn. Pinus sylvestris pygmæa, *Hort.*

A very dwarf variety, not growing more than one or two feet high, but spreading widely in a horizontal direction, and having very stunted branches and leaves.

PINUS SYLVESTRIS LATIFOLIA, *Gordon*, the Persian Scotch Fir.
Syn. Pinus Erzeroomica, *Calvert.*
„ „ sylvestris Persica, *Hort.*
„ „ Caucasica, *Fischer.*
„ „ altissima, *Ledebour.*

Leaves much broader, more glaucous, and longer than any other variety of P. sylvestris. It is very robust, and grows rapidly to a great size on the mountains near Erzeroom, in Persia, and on the Caucasian Mountains.

PINUS SYLVESTRIS ALTAICA, *Ledebour*, the Altai Scotch Fir.
Syn. Pinus sylvestris Uralensis, *Fischer.*
„ „ Padufia, *Ledebour.*

A compact, pyramidal, middle-sized tree, with much shorter and stiffer leaves, growing about fifty feet high on the bleak Altaian Mountains.

PINUS SYLVESTRIS ARGENTEA, *Steven*, the Silvery Scotch Fir.
Syn. Pinus sylvestris hamata, *Steven*.

This differs from the other varieties in having its cones and leaves of a beautiful silvery hue. It is from the mountain chain east of the Black Sea, where it attains to a great size.

Section II. TERNATÆ, OR THOSE KINDS HAVING THREE LEAVES IN EACH SHEATH.

No. 25. PINUS AUSTRALIS, *Michaux*, the Southern or Swamp Pine.

Syn. Pinus palustris, *Miller*.
" " Americana palustris, *Duhamel*.
" " Georgica, *Hort*.
" " Palmiensis, *French Gardens*.
" " Palmieri, *Manetti*.

Leaves in threes, very long, collected in bundles at the extremities of the branches, eight or nine inches long, with those on young plants frequently a foot long; of a brilliant green, rather stout, and reflexed, when full grown. Sheaths from one and a half to two inches long when young, but afterwards lacerated at the ends, and much shorter on the old leaves. Branches few, very robust, and irregularly placed on the trunk. Buds very large, imbricated, and free from resinous matter. Cones very long, cylindrical, tapering to a blunt point; seven or eight inches long, and two inches and a half broad, and of a rich chestnut-brown colour. Scales from one to one inch and three-quarters broad, enlarged at the base, and elevated into a small pyramid, terminated by a small incurved prickle in the centre. Seeds rather large, oval, half an inch long, of a whitish colour, and with wings nearly one inch and a half long.

A large tree, growing 60 or 70 feet high, and one foot and a half in diameter for two-thirds of its length, in favourable situations.

It is found covering vast tracts, called Pine-barrens, in Virginia, Georgia, and from North Carolina to Florida, near the sea-coast.

This Pine is called by the American settlers in the Southern States "the Broom Pine," and by those in the Northern States "Red Pine," "Pitch Pine," and "Yellow Pine;" while the French and Italians call it the "Palm Pine."

Timber excellent, and full of resin, and known by the name of the Georgia Pitch Pine.

There is the following variety:—

PINUS AUSTRALIS EXCELSA, *Loudon.*
Syn. Pinus palustris excelsa, *Booth.*
„ „ lutea, *Makoy.*

This variety is said to have longer leaves, to grow much taller, and to come from the North-west Coast of America, and to be perfectly hardy even in Germany.

No. 26. PINUS BENTHAMIANA, *Hartweg*, Mr. Bentham's Pine.
Syn. Pinus Sinclairii, *Hooker.*

Leaves in threes, thickly set on the branches, dark-green, and resembling those of Pinus ponderosa, but much longer, usually 11 inches in length, very stout, rather flat, with a slight elevated rib running along their inner side. Sheaths partly persistent, and nearly an inch long on those of the young shoots, slightly shaggy, except at the extremity, where they are very ragged or torn. Seed-leaves, on the young plants, from seven to eight in number, and rather long. Branches rather numerous, very stout, spreading, and rather irregular, with the bark rough. Buds large, dark brown, much imbricated, and destitute of resinous matter, or nearly so. Cones in clusters of three or four together, slightly pendulous, and quite straight, six inches in length, and two inches and a half broad at the widest part, which is rather below the middle; the base is unequal-sided owing to the numerous very small scales there curving to one side, and forming a kind of hood round the base of the cone, which is quite sessile, or without any foot-stalk. Scales largest at the widest part of the cone, which is about one-third from the base, then diminishing gradually towards the point, which is rather blunt; those scales nearest the base are very small, particularly the first four or five rows, and more elevated in the centre, which is terminated by a stout broad point; the larger scales are rather thin, and slightly elevated, or nearly flat, three-quarters of an inch broad, and half an inch deep, with a slightly elevated ridge across the middle of each, terminated in the centre by a very stout spine, which is quite straight; each cone has from thirteen to fifteen rows of scales. Male flowers large, cylindrical, and in large, compact clusters; and each scale contains within it two seeds, which are rather below the middle size, but with wings rather more than an inch in length, and half an inch in breadth.

This noble pine, which seems to be entirely a mountain species, sometimes attains a height of 200 feet, with a stem twenty-eight feet in circumference. Mr. Hartweg first met with it on the mountains of Santa Cruz, a coast range running due north across the bay from Monterey, and distant by water about twenty-five miles, although sixty miles by land; afterwards he found it in the Sacramento country, growing upon the ridge generally termed by emigrants from the United States, the Californian Mountains. Mr. Hartweg says, "After crossing the Chuba River, you pass the prairie, and enter the mountains near Bear Creek, where you have to pass through an interminable wood of Pinus Sabiniana, and in ascending the gradual acclivity of the mountain, you lose the region of Pinus Sabiniana, and enter that of Pinus Benthamiana, which seems to be characteristic of the upper region." Some trees of this noble pine attain an enormous size; the largest which Mr. Hartweg measured in this locality was 28 feet in circumference, and 220 feet in height. It generally grows in masses, or intermixed with a few solitary Pinus Lambertiana, which is of equal dimensions in these regions. The lofty mountains surrounding Bear Valley are well wooded by Pinus Benthamiana.

This very valuable timber tree was named by Mr. Hartweg, in compliment to George Bentham, Esq., late Secretary to the London Horticultural Society. It is quite hardy, and the most valuable of all the tribe for timber.

No. 27. PINUS BRACHYPTERA, *Wislizenus*, the Short Wing-seeded Pine.

Leaves in threes, but sometimes in twos, or fours, of a dark green, and rough at the edges; from three inches and a half to to six inches long, and mostly in bunches at the ends of the branches. Sheaths persistent, and nearly black when old. Buds covered with regularly acuminated, membranaceous, fringed, persistent scales. Branches horizontal. Cones rather erect, ovate, oblong, or somewhat conical, from two and a half to three inches long, and one inch and a half broad at the widest part. Scales thickened at the base, elevated, recurved, and spiny-pointed. Seeds three or four lines long, and two lines broad. Wings shorter than the seeds.

A handsome tree, growing from eighty to a hundred feet high, and two to three feet in diameter; found abundantly by Messrs. Wislizenus and Engelmann, on the mountains of New Mexico, producing excellent timber.

No. 28. PINUS BUNGEANA, *Zuccarini*, the Chinese Lace-bark Pine.

Syn. Pinus excorticata, *Gordon*.

Leaves in threes, very stiff, convex on the back, and acutely keeled on the inner face; two or three inches long, and thickly placed along the young shoots, frequently in bundles towards the ends of the branches, somewhat in whorls, and irregularly three-edged. Sheaths composed of numerous loose scales, which soon fall off, and leave the base of the leaves naked. Buds non-resinous, and formed of several reddish-brown, smooth, fringed scales, largest at the base, and rough at the edges. Male catkins from five to six lines long, cylindrical, or conical; and when young placed alternately at the base of the young shoots, in clusters, but frequently afterwards very distant, owing to the rapid elongation of the youngshoots. Branches long, very slender, little divided, glaucous, and covered with a smooth gray bark, rendered a little rough on the stem and older branches by the transverse scars, forming rhomboidal-shaped figures, which in due time are shed, and give the stem and branches a very peculiar appearance. Cones ovate, or slightly conical, broadest near the base, two inches and a half long, and one inch and a half in diameter, and obtuse pointed. Scales rather more than three-quarters of an inch across, four lines deep, concave, and thin, with a slightly elevated keel or ridge, transversely placed across the scale near the upper or outer margin, and furnished in the centre with a short, stout, reflexed point, a little sunk; the scales near the base of the cone are very small and numerous.

A middle-sized tree, found in the North of China, and much cultivated by the Chinese on the island of Chusan, and other parts of China, in pots, as the "Lace-bark Pine."

The Chinese call this Pine "Kieu-lung mu" (the skin, or bark-shedding Pine), on account of its shedding its outer bark every season. Why it is called the Lace-bark Pine is not very evident.

It is quite hardy.

No. 29. Pinus Canariensis, *Smith*, the Canary Island Pine.

Leaves in threes, wavy, very long, slender, and spreading; seven inches long, of a shining grass-green, and slightly angular; frequently pendulous when full-grown, and sharp-pointed. Sheaths half an inch long, torn on the margin, and much shorter on the old leaves. Branches rather numerous, and regularly placed on the stem, with the branchlets rather slender and drooping; the larger branches and trunk produce a number of short shoots, and tufts of leaves. Cones oblong, cylindrical, five inches and a half long, and two inches and a half wide, quite straight, without any foot-stalk, and with a hard, glossy surface. Scales one inch broad, terminating in an irregular pyramid, not much elevated, and irregularly four-sided with a blunt point. Seeds half an inch long, with wings one inch and three-eighths long.

A large tree, growing 60 or 70 feet high, on the mountains of

Teneriffe, and on the Grand Canary Island, at an elevation of 5000 or 6000 feet, where it forms extensive forests, from the sea-shore to an altitude on the mountains of 6000 feet. It is most abundant at elevations of from 4000 to 6000 feet above the level of the sea; on the Grand Canary Island the pine forests extend from Oratava to Portillo de la Villa.

The leaves of this pine are sometimes in twos, but more frequently in threes; and the trees ascend on the slope of the Peak of Teneriffe to 7200 feet of elevation; but the zone above 2400 feet is wholly occupied by vast forests, mingled with the Juniperus Cedro of *Webb*. The inhabitants call it Teâ, and consider its timber excellent, being resinous, durable, and free from the ravages of insects. It is tender.

No. 30. PINUS CEMBROIDES, *Gordon*, the Mexican Cembra-like Pine.

Syn. Pinus fertilis, *Roezl.*

Leaves in threes, from one inch to one inch and a half in length on the wild specimens, but rather longer on the young growing plants; tolerably rigid, slightly twisted at the base, three-edged, very dense, and of a bright glaucous green colour. Sheaths short, and soon falling off or curling up. Seed-leaves, on the young plants, from ten to twelve in number when they first come up. Branches vertical, mostly in fives, but sometimes more numerous in a whorl, rather slender, slightly incurved, and spreading, with tolerable smooth bark, and remarkably small buds, which are imbricated and non-resinous, or nearly so. Cones single and stalkless, from two inches and a half to three inches in length, and one inch and three-quarters broad at the base, with six or seven rows of scales, and tapering but slightly to a blunt point; the scales are rounded at the margins, three-quarters of an inch broad, slightly elevated, and nearly all of a size, except those close to the base, which are very much smaller, and more elevated; each scale contains within it two wingless seeds, which are top-shaped, slightly angled at the smaller end, about half an inch in length, and rather thin shelled.

This pine resembles Pinus Llaveana in general appearance, but differs in having shorter, more glaucous, and smaller leaves, and with cones three or four times the size of those of P. Llaveana, with which most writers confound it; the cones of P. cembroides have six or seven rows of scales, while those of P. Llaveana have but three rows.

It was first discovered in Mexico, and introduced by Hartweg, who found it in the cold districts on the mountains of Orizaba, near the village of Chichiquilah, attaining a height of 30 feet at an elevation of 10,000 feet above the sea. The tree is quite hardy, and the seeds are eaten by the inhabitants of Orizaba.

No. 31. PINUS CHIHUAHUANA, *Wislizenus*, the Chihuahua Pine.

Leaves in threes, very rarely in fours, finely toothed along the edges, from two to three inches long, glaucous on the upper part, and light green on the under one, very slightly striated and fringed on the edges, buds scaly, pointed, and closely inlaid. Sheaths at first long, lacerated at the edges, but soon falling off, and leaving the base of the leaves naked. Cones from one to one inch and a half long, and egg-shaped. Scales transversely oval, and without any mucro.

This kind resembles Pinus inops in appearance, but is sufficiently distinct in its smooth cones. It is found common on the mountains of Chihuahua, in North Mexico, at an elevation of 7000 feet above the sea, where it forms a tree from 30 to 35 feet high.

No. 32. PINUS COULTERI, *Don*, Dr. Coulter's Pine.

Syn. Pinus macocarpa, *Lindley*.
„ „ Sabiniana macrocarpa, *Hort.*
„ „ Sabina Coulteri, *Loudon.*
„ „ Sabiniana major, *Manetti.*

Leaves in threes, stout, and rather stiff, from 10 to 12 inches long, and of a glaucous gray colour, ribbed on the inner side, rather flat, incurved, pointed, and compressed. Sheaths ragged, thready, persistent, one inch and a half long on the young leaves, but much shorter and torn on the old ones. Branches stout, rather distant, but regularly placed in whorls on the stem, nearly horizontal, slightly elevated towards the extremities, and tinged with violet on the young shoots. Cones conical-oblong, tapering to the point, solitary, very large, 12 to 14 inches long, and six inches broad, very hard, smooth, pale-yellow, with a polished surface, and frequently weighing from three to four pounds each. Scales wedge-shaped, with the points thickened and drawn out into a strong hook; those nearest the apex shortest, incurved, and slightly bent, while those below the middle and at the base are elongated, deflexed, and point downwards, two inches long, and one inch and a half broad in the largest ones. Seeds half an inch long, of a blackish colour, rather flattened, and much smaller than those of P. Sabiniana, and with broad wings more than an inch long.

A large tree, with spreading branches, growing from 80 to 100 feet high, and three or four feet in diameter, found on the mountains of Santa Lucia, near the Mission of San Antonia in California, within sight of the sea, at an elevation of from 3000 to 4000 feet. It is also plentiful in other parts of California, particularly on the "Crusta," an ascent from San Luis Obispo, on the brow of the mountain.

No. 33. Pinus Cubensis, *Grisebach*, the Cuba Pine.

Leaves in threes, but frequently in pairs, very long, rigid, compressed, and three-sided, rough on the edges, mucronate, or somewhat spiny-pointed, and from eight to ten inches long and nearly a line broad. Sheaths short and persistent. Cones solitary or in pairs, ovate-conical, somewhat obtuse at the points, pendulous, and two and a half inches long and one inch broad near the base. Scales rhomboid, somewhat pyramidally elevated and prominently keeled transversely, with the umbone or scar on the lower ones a little prominent and pointless, and the upper ones with a short straight mucro.

A moderate-sized tree, frequently found about the Havannah, and on the eastern part of the island of Cuba.

It is quite tender.

No. 34. PINUS ENGELMANNI, *Carrière*, Engelmann's Pine.
Syn. Pinus macrophylla, *Wislizenus.*

Leaves in threes, but sometimes in fours, and very rarely in fives, from 13 to 15 inches long, clustered at the ends of the shoots, partially glaucous, keeled on all faces, and serrulated on the edges. Sheaths at first long, scaly, jagged at the ends, and one inch long, but afterwards much lacerated and shorter. Cones four inches long, and one inch and a half in diameter near the base. Scales conical, with a bent spiny mucro on the summit

A fine tree, common on the higher mountains of Cosihuiriachi, in North Mexico, growing 70 or 80 feet high, very much resembling the Swamp Pine of the United States, but differs in having much smaller cones, and in the leaves being three, four, and five in a sheath.

No. 35. PINUS GERARDIANA, *Wallich*, Captain Gerard's Pine.
Syn. Pinus Neoza, *Govan.*
„ „ Chilghosa, *Elphinstone.*
„ „ Aucklandii, *Loddiges.*

Leaves in threes, stiff, three-edged, stout, and bluntly terminating in a short point; from three to five inches long, of a bluish-green colour, and glaucous when young. Sheaths short at first, and composed of dry, reddish-brown scales, but soon rolling up and falling off. Branches ascending, lower ones spreading. Branchlets short, rather slender, and confused. Cones ovate, oblong, or somewhat cylindrical; widest at the base, from six to eight inches long, and from 12 to 14 inches in circumference near the base, and of a bluish colour when young.

Scales thick, blunt, much recurved, and spiny at the points. Seeds nearly an inch long, cylindrical, almost wingless, pointed at both ends, of a dark brown colour, and agreeable to eat.

A tree growing 50 feet high, with a compact head, found in great abundance, forming large forests on the northern side of the snowy range of mountains in Kunawur, beyond the influence of the periodical rains, where it grows in very dry, rocky ground; and according to Major Madden, its manner of growth differs from that of any of the other pines of India. Its trunk is of large girth, but scarcely exceeding 50 feet in height, furnished with numerous horizontal branches, nearly to the ground, the upper ones forming a large, compact, conical head. It is also found to the North of Cashmere, and on the Astor Mountains in Little Thibet. The mountains near Nijrow, in the Kohistan of Cabul, are also covered with the Chilghosa Pine. Captain Gerard states its highest limits on the inner Himalayas to be from 10,000 to 12,000 feet of elevation. The exterior bark is of a silvery gray, falling off in large flakes, and never transforms itself into the rough outer coating like the other pines. It is called "Rhee" or "Ree" in Kunawur, "Shungtee" by the Thibetans, and "Sonoubar Sukkar" (sweet pine nut) by the Persians and Arabs.

The Shipkees in Thibet call this pine "Kuminche" and "Sunoubur-Sughar" (lesser sweet-nut pine), an apt name enough, for the tree seldom grows more than 50 feet high. Mr. Winterbottom found it as far north as Gilgit; but neither Drs. Hooker nor Griffith ever seem to have discovered it in a native state either in Eastern Nepal or Sikkim; and Capt. Gerard states its highest altitude on the southern exposures of the inner Himalayas to be from 10,850 to 12,300 feet, generally associated with Cedrus Deodora. Dr. Griffith found it in Affghanistan occurring on the outer ranges, indicating exemption from the periodical rains. It is styled by Europeans "the edible pine-nut;" the seeds being nearly an inch long, very sweet, and said to possess many good qualities, amongst which that of easy digestion is certainly not to be reckoned one.

The Neoza Pine also affords abundance of fine turpentine, and the cones exude a copious white resin, and produce about 100 seeds each, which are sold in the Simla bazaars under the name of Neoza nuts, and in those of Affghanistan as Chilghoza nuts.

It is quite hardy, but very slow in growth.

No. 36. PINUS GREGGI, *Engelmann*, Dr. Gregg's Mexican Pine.

Leaves in threes, short, rigid, compressed, and three-sided, somewhat rough on the margins, and from two and a half to three inches long, and half a line wide. Cones oblong, or oblong-cylindrical, obtuse at the points, pendulous, subsessile, and three inches and three-quarters long and one and a half broad. Scales somewhat rhomboid, shining, and pyramidally depressed. Those on the outer side of the cone are pyramidally elevated, sharply keeled transversely, blunt pointed, and much the largest. Umbone or scar somewhat depressed and mucronate. Mucro short, thick, and deflexed, but sometimes wanting.

A moderate-sized tree, from 30 to 50 feet high, resembling Pinus Teocote, found on the mountains of Sullillo in Mexico, by Dr. Gregg, and of which but very little is known.

No. 37. PINUS INSIGNIS, *Douglas*, the Remarkable Pine.

Syn. Pinus Californica, *Loisel*, not *Hartweg.*
„ „ adunca, *Bosc.*
„ „ Montereyensis, *Rauch.*

Leaves in threes, deep grass-green, rather slender, straight, or twisted in all directions, very densely set on the branches, of different lengths, from four to six inches long, ribbed on the inner sides, and sharp-pointed. Sheaths very short, smooth, and rather more than a quarter of an inch long. Branches numerous, rather irregular, and thickly set with slender branchlets at the extremities. Cones ovate-conical, much pointed, most developed on the exposed side, particularly towards the base or outer part, three inches and a half long, and two inches and a half wide, mostly in clusters of from three to five round the stem or principal branches at the top of the tree, of a pale, yellowish-brown colour, very hard, and with a smooth, glossy surface; they point downwards, and remain for several years on the tree. Scales radiately divided, thickest at the base, tapering into a four-sided, blunt pyramid, with a sunken scar in the centre, terminated by a very short prickle, largest on the exposed side, particularly towards the base, while those towards the points are very small and little elevated. Seeds middle-sized, nearly black, and with ample wings, more than an inch long. It takes two years to ripen the cones.

This beautiful pine is found in various parts of California growing to the height of from 80 to 100 feet, and from two to four feet in diameter, feathered to the ground with branches.

It is found on the higher parts of the coast range of mountains, but not more than 200 or 300 feet above the level of the sea, particularly on "Point Pinos," near Monterey, where some of the trees become one-sided, on account of the north-west winds blowing for a great part of the year upon them.

It is a very handsome kind, and tolerably hardy.

No. 38. PINUS INSULARIS, *Endlicher*, the Timor Pine.
Syn. Pinus Timoriensis, *Loudon.*

Leaves in threes, very slender, drooping, bright green, and from six to nine inches long. Sheaths persistent, and one inch long. Buds scaly, non-resinous, and blunt-pointed. Cones egg-shaped, tapering to the point, and three inches long. Scales pyramidal, angular, small, wart-shaped, and conical.

A tree of which little is known, found by Cumming in the Philippine Islands, and, according to Lambert, on the island of

Timor. It very much resembles Pinus longifolia, but differs in having much slenderer and darker green leaves, and very much smaller cones.

It is quite tender.

No. 39. PINUS JEFFREYII, *Balfour*, Jeffrey's Pine.

Syn. Pinus Jeffreyana, *Van Houtte.*

Leaves in threes, pendulous at the ends, deep green, keeled on the inner face, rounded on the back, very acute pointed, and from eight to nine inches long. Sheaths persistent, one inch and a quarter long when young, but very much shorter, lacerated at the ends, and of an ashy-gray colour when old. Buds short, stout, imbricated, and resinous. Branches horizontal, a little declining, rather slender, and of a light, yellowish-red colour. Cones large, ovate-conical, tapering most to the point, eight inches long, and three inches and a half in diameter at the widest part, which is towards the base, and mostly produced in clusters round the branches. Scales pyramidal, more or less projecting, one inch and a half broad in the larger ones, but much less on those towards the base and extremity, stoutly hooked towards the points, the hook being nine-tenths of an inch long, and slightly incurved on all the scales. Seeds four-tenths of an inch long, and dark-brown, with wings, rather more than an inch long, beautifully striated with dark-brown.

A noble tree, growing 150 feet high, and four feet in diameter, found by Jeffrey in the Shasta Valley in Northern California, growing in poor, sandy soil.

A very distinct pine, and quite hardy.

No. 40. PINUS KASIYA, *Royle*, the Khasiya Pine.

Syn. Pinus Cavendishiana, *Paxton.*
„ „ Khasyana, *Hooker.*
„ „ Nepalensis, *Pinetum Woburnense.*

Leaves in threes, very slender, long, spreading, compressed, three-sided, somewhat convex on the back, scabrous on the margins, mucronate, or somewhat spiny-pointed, bright green, and from six to eight inches long, and one-third of a line wide. Cones three or four in a whorl, broadly-ovate, or somewhat rounded, more or less pendulous when full grown, nearly sessile, and from one and three quarters to two and a half inches long, and one inch and a half broad near the base. Scales somewhat rhomboid, more or less pyramidally elevated, and slightly keeled transversely. Umbone either slightly elevated or depressed, and hardly mucronate. Seeds small, with short oblong wings.

A tree from 50 to 60 feet high, found on the Khasiya hills at elevations from 2000 to 6000 feet, and on the mountains of Upper Assam in Eastern India.

It is quite tender.

No: 41. PINUS LAWSONI, *Roezl*, Lawson's Mexican Pine.

Leaves mostly in threes, but sometimes in fours, six inches long, rather slender, sharp-pointed, angular on the inner face, rounded on the outer one, and quite entire on the margins. Sheaths on the young leaves nearly an inch long, and composed of distant, sharp-pointed, loosely imbricated scales, silky at the edges, while those on the adult leaves are much wrinkled, half an inch long, more or less furnished with distant scales, and jagged at the ends. Branchlets rather slender, very leafy, and furnished with a broad, acute-pointed scale at the base of each sheath of leaves, when young. Buds covered with imbricated, resinous scales. Cones from two to two and a half inches long and one inch and a half broad near the base, conical in shape, ashy-gray in colour, and very much resembling those of Pinus sylvestris in size, shape, and general appearance. Scales very small, mostly equal in size, except those at the base of the cone, which are smallest, while those on the outer or exposed part are much the largest, more elevated or thickened at the points, and sometimes slightly recurved; protuberances rounded on the lower scales, keeled on the upper ones, and all of them terminated by a large, dark, blunt point.

A middle-sized tree, found on the higher mountains of Mexico.

No. 42. Pinus Llaveana, *Schiede*, Llave's Pine.

Syn. Pinus osteosperma, *Wislizenus.*
„ „ cembroides, *Zuccarini.*
„ „ edulis, *Engelmann.*

Leaves in threes, but often in twos, short, slightly twisted, sometimes incurved, rigid, narrow, bright, glaucous green, very dense, from two to two inches and a half long, ribbed on the inner side, terminated with a sharp point, and frequently intermixed with lance-shaped scales (abortive leaves), particularly on the smaller shoots near the base, and which are sometimes of a glaucous white colour, like those on the Stone Pine (P. Pine); sheaths very short on the young leaves, but soon rolling up and falling off the adult ones. Branches numerous, in regular whorls, smooth, of an ash-gray colour, and horizontal, with the points slightly elevated, and the branchlets spreading in all directions. Buds small, blunt-pointed, numerous, and thickly covered with brown scales, reflexed at the points, and slightly resinous. Cones small, consisting of only three rows of scales, roundish, obtuse, wider than long, one inch and three-quarters wide, and one inch long, solitary, without any foot-stalk, and taking two years to ripen. Scales thick, rounded at the margin, rhomboid, bluntly-pyramidal, hard, glossy, slightly angular, and more or less curved downwards, keel-shaped below, three-quarters of an inch broad, deeply concave on the inner side, and with two deep receptacles for the seed at the base. Seeds very large, without wings, top-shaped, dark-brown, with a hard shell, and six or seven lines long, and nearly four broad, they are very agreeable to eat, but thick shelled.

A low tree, with ample spreading branches, growing from 15 to 20 feet high, and occasionally cultivated in gardens for the sake of its seeds, which the Mexicans call "Pinones."

It is found in Mexico, on the barren hills of Zimapan, Real del Oro, and Real del Monte, in forests at elevations of from 8000 to 9500 feet. Timber of little use. It is tolerably hardy.

No. 43. PINUS LONGIFOLIA, *Roxburgh*, the Long-leaved Pine.
Syn. Pinus Serenagensis, *Madden.*

Leaves in threes, very slender, three-edged, of a bright, glossy green, finely serrated on the edges, and rather pendulous, or curved backwards on the young tree, from 12 to 14 inches long, thickly set on the gross branches, particularly towards the ends and upper parts of the tree. Sheaths one inch and a quarter long, and permanent. Male flowers produced in long, close clusters of many together at the ends of the branches, round at first, but elongated as they open and blossom in March. Cones either singly or in clusters, varying from three to five in number, in regular whorls, five inches long, and two and a half or three inches in circumference near the base, more or less ovate, very smooth, glossy, and hard. Scales much thickened at the ends, and with a large, thick, hooked beak, one inch and a quarter wide in the larger ones, but more recurved and smaller towards the base, and full of resinous matter. Seeds large, with rather long, narrow wings one inch and a half long, and eaten by the hill people in India.

This species attains to a height of from 60 to 100 feet, and is confined in a great measure to the outer or lower ranges of the mountains, commencing as low as 1000 feet above the level of the sea, and rarely, if ever, attains a greater elevation than 7000 feet, but appears to have a very great power of enduring variations of climate; for it seems equally at home in the hot, damp valleys of Sikkim, as on the dry, stony hills of the Punjab, where rain hardly ever falls, and it is at all seasons exposed to a powerful and scorching sun. It is very common throughout the whole region of the Punjab, and as far to the east as Bhotan, occurring in all intermediate altitudes, and where, from the diversity of climate and different aspects in which it grows, it is known under various names. It also abounds in all the lower and outer ranges of the Himalayas, from Bhotan to Affghan. Dr. Griffith describes it as descending in Bhotan to the low elevation of 1800 or 2000 feet above the sea, while on ranges between the Jumna and Sutlej, it is abundant at from 2500 to 3000 feet of elevation, and finally it becomes stunted, and disappears at Simla, at an elevation of 7000 feet, but occurs in greatest perfection and abundance at Kamaon and Gurhwal, north of the Pindur, at from 2500 to 7000 feet of elevation, and which places seem little else than one great forest of the Cheer Pine. It has a rough bark, divided by deep fissures into large and longish plates, and the stem of the larger trees are about 12 feet in girth, with a clear stem 40 or 50 feet from the ground, and with an exceedingly picturesque head, very irregular in outline, as the branches are irregularly and thinly scattered along the stem. A large quantity of tar and turpentine is extracted from the wood, and the chips are used for candles in India, and called "Chamsing" (night-lights); and, according to Dr. Hooker, ink is made in Sikkim from the charcoal of the burnt leaves mixed with rice-water.

It is called "Cheer" by the hill people in India; a word, according to some, meaning "Bark," or "Rind," so conspicuous on old trees; but, according to others, from its milk or turpentine, which it produces in great abundance. It is called "Sulla" by the mountain people from Nepal to Busehur, a term denoting "to spread fragrance," which this tree does to a remarkable extent. On the upper banks of the Jhelum river it is styled by the people "Anunder;" and throughout Kangara and the eastern hills it is named "Cheel," "Gulla," and "Thansa," or "Thanshing." There are two varieties: one, which has its woody fibre twisted, but open in the grain, and of a white colour, and called "Kutcha" by the natives; the other, in which the fibres are straight, has reddish and compact wood, and is called "Pucka;" but this character is not permanent, as sometimes the wood, though white, is compact and straight-fibred. The reddish wood, however, is preferred by the natives, and sold under the name of "Dadar." The twisted kind, being subject to warp and split, is rejected, and never used for architectural purposes; but the Cheel timber, found growing in all places at an elevation of 5000 feet and upwards, with a northern aspect and on poor soil, is invariably the straight-fibred kind, and the timber is good. Again, in southern localities and lower down, it is twisted in the fibre, and but of little use for house-building and similar purposes. The better variety, however, is extensively used for boat-building in India; but boats built of its wood do not last more than six or seven years, the timber being liable to rot, if exposed to the weather; while, on the other hand, if protected, it is well adapted for house-building purposes, although for ship-building and spars it is almost useless, as it resists so badly the effects of the weather, and is so soft; but the quality of its timber differs more, perhaps, than that of any other pine, consequent on its growing in high or low situations. The forests near Almorah, at an elevation of 4500 feet, produce excellent timber for domestic purposes, under the name of "Surul" (straight), either from the tall, straight, branchless stems of old trees, or from the woody fibre rending freely and quite straight in the grain. In the Sanscrit dialect it is called "Tanshing," or "Tansa" (Needle Tree), on account of its long, needle-like leaves.

Timber excellent, and full of turpentine; but the trees are too tender for an ordinary English winter; some, however, are hardier than others, which, no doubt, arises from the locality and elevation where the seeds were gathered—certainly not from any specific distinction.

No. 44. PINUS PARRYANA, *Gordon*, Mr. Gambier Parry's Pine.

Leaves in threes, rather slender, narrow, and wavy, from eight to nine inches long, rounded on the outer side, three-edged, and keeled on the inner faces, very acute-pointed, minutely serrated along the edges, and regularly tapering from the base to the point; sheaths rather short, scaly, and, when old, very much wrinkled, jagged at the ends, and nearly black. Branches rather long, horizontal, and much resembling those of

Pinus Benthamiana, but slenderer. Cones in clusters round the branches, a little declining, regularly conical, widest near the base, and tapering to the apex, six inches long, and two inches in diameter at the widest part, sessile, with a crowd of very small scales close to the base. Scales rhomboid, numerous, glossy, hard, woody, and largest on the widest part of the cones, nearly one inch broad, and half an inch long, but much smaller at both extremities; slightly elevated across the middle by a transverse, acute keel or ridge, highest in the centre, and terminated by a short, straight, sharp point of a dark brown colour. Seeds below the middle size, almost round, with rather narrow linear wings, rounded and bifid at the apex, of a grayish colour, and not very membranaceous. The cones resemble those of the common Cluster Pine (P. Pinaster), and are very different from any other known Californian Pine, they are of a bright, glossy, yellow colour, and entirely free from resinous matter.

A large tree, resembling Pinus Benthamiana, but with much narrower and slenderer leaves, and very different cones, found on the Sierra Nevada, in Upper California, by Lobb and Bridges.

It is quite hardy.

No. 45. PINUS PATULA, *Schiede,* the Spreading-leaved Mexican Pine.

Syn. Pinus subpatula, *Roezl.*
„ „ Escandoniana, *Roezl.*
„ „ Hoseriana, *Roezl.*
„ „ prasina, *Roezl.*
„ „ Tzompoliana, *Roezl.*

Leaves in threes, but not unfrequently in fours and fives; very slender, soft, spreading, light green, and recurved, from seven to nine inches long, deeply channelled on the upper side, and convex beneath. Sheaths on the young leaves scaly, one inch and a half long, but very much shorter, and rather jagged on the old ones. Branches slender, smooth, numerous, but rather irregularly placed on the stem, with the ends rather pendulous, and covered with a smooth, grayish, lead-coloured bark. Cones ovate, oblong, tapering to an obtuse point, four inches long, and one inch and three-quarters broad, with a smooth polished surface, of a pale brown colour, mostly growing in clusters of from three to five in number round the stem and leading branches, slightly incurved, and pointing downwards. Scales slightly elevated, particularly on the exposed side, widened at the point, much depressed, flattish, unequally four-sided, and with a small prickle in the centre when young. Seeds small, with rather broad wings, nearly an inch long.

A fine graceful tree, growing from 60 to 80 feet high, regularly furnished with spreading branches and drooping leaves, somewhat resembling a beautiful shining green fountain.

It is found plentifully in the colder regions of Mexico, particularly on the Real del Monte chain of mountains, at "Guajalote," and the "Sumate," on the highest peaks, at elevations of from 8000 to 9500 feet above the sea. There are the following varieties:—

PINUS PATULA STRICTA, *Bentham.*

Syn. Pinus patula erecta, *Hort.*

This is a more slender tree, with shorter and stiffer foliage, which does not droop, and only a little spreading, but with cones only half the size of those of the species.

It is found on the Real del Monte range of mountains in Mexico, a tree from 50 to 60 feet high.

PINUS PATULA MACROCARPA, *Schiede.*

Leaves in threes, but frequently in fives, slender, and very like those of the species. Cones very large, from six to seven inches long, and two inches broad; glossy, pale brown in colour, and with the scales less elevated, but more drawn to a flattened pyramid.

It is a much larger and taller tree than the species, growing upwards of 100 feet high, but at a much lower elevation than the species.

No. 46. PINUS PINCEANA, *Gordon*, Mr. Pince's Mexican Pine.

Leaves in threes, but frequently in twos, very slender, three-edged, straight, and rather blunt-pointed; from three to four inches long, quite entire on the margins, and of a slightly glaucous green colour. Sheaths scaly, and soon falling off. Branches long, slender, flexible, and pendulous; branchlets slender, long, and drooping. Cones from three to three inches and a half long, and one inch and a half broad a little above the base, conical, blunt-pointed, of a glossy brown colour, and on rather stout foot-stalks. Scales irregularly shaped, somewhat four-sided, rounded on the upper margin, and largest one-third from the base of the cone; those nearest the base being very much the smallest, more or less angular, and elevated, with the outer side keeled, and much the longest, while those along the middle of the cone are nearly flat or slightly elevated, with a sharp transverse ridge across the centre, terminated in the middle by a large oval projecting scar, a little hollow on the top, and when young furnished with a broad spine. Seeds very large, wingless, and more than half an inch long.

A very handsome tree, growing 60 feet high, with long weeping branches like those of the Weeping Willow, and easily distinguished from all other Mexican pines on that account.

It was first discovered in 1844 by M. Gheisbreght, near the Hacienda del Potrees, in the Ravine of Mestitlan, on the route from Mexico to Tampico, and is No. 34 of M. Gheisbreght's specimens. It was also found by Mr. Charles Ehrenberg (to whom I am indebted for my specimens, and account of the tree), upon a mountain along the road to the city of Mexico, at a place called Cuernavaca, at an elevation of from 8000 to 9000 feet.

No. 47. PINUS PONDEROSA, *Douglas*, the Heavy-wooded Pine.
Syn. Pinus Nootkatensis, *Manetti*.
" " Craigiana, *Balfour*.
" " Beardsleyi, *Murray*.

Leaves in threes, from eight to ten inches long, twisted, rather broad, and flexible, thickly set on the branches, and sharp-pointed. Sheaths one inch long, smooth, but much shorter and shrivelled on the old leaves. Branches few, in regular whorls, robust, twisted, and rather drooping; buds bluntly-domed, with a prominent point, and full of resin. Cones straight, ovate, tapering to both ends, particularly towards the apex, three inches and a half long, and one inch and three-quarters broad; in clusters round the branches, on very short, stout foot-stalks, bent downwards. Scales flattened, irregularly four-sided, one inch broad, with a raised centre, terminating in a conical recurved spine, slightly four-sided. Seeds middle-size, with short broad wings three-quarters of an inch long.

A tree of great size, growing upwards of 100 feet high, and four or five feet in diameter, with 30 or 40 feet of the stem free from branches.

It is found abundantly throughout the lower valleys on the North-west coast of America, and in California, particularly on the banks of the Flathead and Spoken Rivers, and the Kettle Falls of the Columbia, west of the Rocky Mountains, and in Rose River Valley in California, mostly growing in alluvial soils.

This pine is called "Tappa" (white wood) by the Indians, and the "Bull Pine" and "Yellow Pine" by the settlers on the North-west coast of America and along the Columbia River, on account of its coarse-grained timber, and the yellow colour of the heart wood.

The heart wood of old trees scarcely floats in water, and is a most valuable timber.

No. 48. Pinus radiata, *D. Don,* the Radiated Cone Pine.

Syn. Pinus insignis macrocarpa, *Hartweg.*

Leaves in threes, very slender, twisted, deep green, thickly set on the branches, and from three and a half to four inches in length. Sheaths short, smooth, a quarter of an inch long on the young leaves, but very much shorter on the older ones, and only partially persistent. Seed-leaves, on the young plants, from seven to eight in number, rather long, and slender. Branches compact, numerous, rather regular, and slender, particularly the lateral ones. Bark light brown, and rather smooth. Buds small, numerous, imbricated, and full of resinous matter. Cones mostly single, but sometimes two or three together, rather conical, very hard, slightly incurved, pendulous, and of a glossy light brown colour; six inches long, three inches and a half broad near the base, which is uneven as well as the sides, the outer side being much the longest. Scales radiant, largest at the external base and down three parts of the outer side of the cone, deeply divided, much elevated, and prolonged into a blunt-pointed nipple, half an inch in length, and three quarters of an inch broad; those scales nearest the base being bent backwards, the others more or less convex, widest at the base, bluntly conical, slightly angular, and terminated by a blunt point; the scales on the inner side of the cone, and for four or five rows round the point, are very much smaller, quadrangular, and slightly elevated, with their points quite flat, or slightly depressed. Each cone contains from fourteen to sixteen rows of scales, within each of which are two small, nearly black seeds, with a very rough shell, and with wings one inch long, and three-eighths of an inch broad.

This beautiful pine resembles Pinus insignis in some respects, but differs very much in foliage and cones; the leaves of P. insignis are much longer and stouter than those of P. radiata, while the cones of P. radiata are nearly three times the size of those of P. insignis, and with the scales much more elevated. It was first discovered by the late Dr. Coulter, in Upper California, in latitude 36 deg., near the level of the sea, and almost close to the beach, growing singly, and attaining the height of 100 feet, with a straight stem feathered to the ground with branches. He says it affords excellent timber, which is very tough, and admirably adapted for boat building, for which purpose it is much used at Monterey. Mr. Hartweg met with it on the descent towards the sea, on the mountains of San Antonio, sixty leagues south of Monterey, forming a small wood, extending along the beach, where the deep grass-green of its foliage formed a great contrast with the parched-up vegetation around it at the time.

It is hardy, and well adapted for planting near the sea-coast.

No. 49. Pinus rigida, *Miller,* the Stiff-leaved Pine.

Syn. Pinus Tæda rigida, *Aiton.*
„ „ Fraseri, *Loddiges.*
„ „ Canadensis trifolia, *Du Hamel.*
„ „ Loddigesii, *Loudon.*

Leaves in threes, from three to four inches and a half long, stiff, rather broad, and sharp-pointed, light green, and spreading; sheaths short, three-eighths of an inch long, and white on the young leaves, but afterwards becoming nearly black and shrivelled. Branches very numerous on the upper part of the tree, and compact. Cones ovate-oblong, from two inches and a half to three inches and a half long, and one inch and a half broad, on short, stout foot-stalks, in clusters of four or five round the top branches, and remaining on the tree for years. Scales four-sided, half an inch broad, elevated into a compressed pyramid, terminating in an acute prickle, slightly recurved, and pointing outwards. Seeds very small, with rather narrow wings, three-quarters of an inch long.

A tree growing from 70 to 80 feet high, in favourable situations, with a clean stem and dense top, found abundantly throughout the whole of the United States, with the exception of the maritime parts of the Atlantic districts and the fertile regions west of the Alleghany Mountains. It is found on the plains from New England to Virginia, growing either in dry soil, or in wet, low grounds. Its most northern point is in the vicinity of Brunswick, in the district of Maine.

Timber exceedingly knotty, and full of resin, for which reason it is called in America, the "Pitch Pine."

No. 50. PINUS SABINIANA, *Douglas,* Mr. Sabine's Pine.

Leaves in threes, rather slender, from 10 to 12 inches long, glaucous-gray in every stage, twisted, and, when fully grown, bent downwards, and drooping during winter, sharp-pointed, angular on the inner side, and rounded on the outer one; sheaths one inch and a half long, nearly entire at the top, with numerous rings, and wrinkled when old. Branches numerous, not very robust, covered with a violet bloom when young, and bare of leaves, except near the extremities. Cones ovate, most developed on the outer side, particularly towards the base, pointing downwards, pressing against the stem, and remaining on the tree for a series of years, from eight to ten inches long, and six inches wide, on foot-stalks two inches and a half long, and full of resin, particularly towards the base. Scales spatula-shaped, flat on the inner side, and rounded or slightly angular on the outer one, two inches and a half long, and one inch and a half broad in the larger ones, but much less on the smaller ones towards the base, terminated by a strong, sharp, incurved hook, particularly on the exposed side, and at the base, where some of the points are quite straight, and pointing upwards or towards the top of the tree. Seeds, one inch long, oblong, tapering to the base, and flattened on the inside, with a hard shell, and short, stiff wings, rather more than half an inch long; they are pleasant to eat, and nearly double the size of those of P. Coulteri. Seed-leaves from eight to ten in number.

A beautiful large tree, irregularly furnished with branches to the ground, growing from 100 to 150 feet high, and from two to five feet in diameter, on the western Cordilleras of New Albion, at great elevations, also on the woody heights near Monterey, at El Toro, a high mountain to the east of Monterey, and in various other places in Upper California, but never in masses or forests, but intermixed with other kinds, ripening its seeds in November.

Timber white, even-grained, but not very durable.

It was named in compliment to the late Joseph Sabine, Esq.

No. 51. PINUS SEROTINA, *Michaux*, the Fox-tail or Pond Pine.

Syn. Pinus Tæda alopecuroides, *Aiton.*
„ „ rigida serotina, *Loudon.*
„ „ alopecuroides, *Hort.*

Leaves in threes, but sometimes in fours, from six to eight inches long, rather slender, sharp-pointed, and stiff, of a light, bright green, very dense, and ribbed on the inner side; sheaths persistent, three-quarters of an inch long on the young leaves, smooth, jagged at the ends, and light-coloured, while those on the older leaves are much shorter, shrivelled, and dark brown. Branches numerous, rather irregular, and of a bright yellowish-brown colour, frequently producing tufts of leaves, and bundles of small shoots from the main stem. Cones ovate, with short foot-stalks, pointing downwards, two inches and a half long, and nearly two inches wide, mostly in opposite pairs, and ripening in the autumn of the second year, but do not shed their seeds before the third or fourth year; and on which account it is called serotina. Scales rounded at their extremities, slightly elevated, four-sided, three-eighths of an inch broad, with the apex depressed, and terminating in a slender prickle, which soon disappears. Seeds very small, with wings three-quarters of an inch long.

A middle-sized tree, growing from 40 to 50 feet high, and from 15 to 18 inches in diameter, on the edges of swamps and ponds, in black, miry soil, in Pennsylvania, Carolina, and New Jersey.

Timber of little use except for fuel.

No. 52. PINUS SINENSIS, *Lambert*, the Chinese Pine.

Syn. Pinus Massoniana, *Parlatore*, not *Siebold.*

Leaves in threes, but frequently in twos, very slender, spreading, sharp-pointed, grass-green, five inches long, and angular on the inner sides; sheaths smooth, half an inch long, rather entire at the ends, and of a brownish colour. Branches rather slender, irregularly placed on the tree, and spreading; buds blunt-pointed, with numerous fine scales, and entirely destitute of resin. Cones small, ovate, blunt-pointed, two inches long, and one inch and a quarter broad, four or five in a whorl, and on very short foot-stalks. Scales rounded, flat, slightly elevated by a raised line across the middle, terminated in the centre by a sunken scar, and with the scales much smaller towards the base. Seeds rather small, with straight wings half an inch long.

A low, branching tree, growing 30 or 40 feet high, with a drooping appearance, found on the hills all over China, and in Japan.

It is rather tender.

No. 53. PINUS TÆDA, *Linnæus*, the Torch, or Loblolly Pine.

Syn. Pinus Virginiana tenuifolia, *Plukenett.*

Leaves in threes, rather slender, and light-green, from five to five inches and a half long, rigid, blunt-pointed, and channelled in the middle on the inner side; sheaths one inch long, nearly smooth, and whitish when young, but becoming much shorter and browner when old. Branches spreading and dense; buds pointed and very full of resin. Cones mostly in pairs, ovate-oblong, tapering to a blunt point, three and a half to four inches long, and from one and three-quarters to two inches broad, with little or no foot-stalk. Scales one inch and a quarter long, and three-quarters of an inch wide, lengthened into a low pyramid, terminated with a sharp prickle turned inwards. Seeds small, with ample wings, nearly an inch in length.

A lofty tree, growing 80 feet high, with a clear stem 50 feet, and from two to three feet in diameter, with a wide-spreading head.

It is found abundantly in barren, sandy situations, from Florida to Virginia, in North Carolina, in large forests, sometimes 200 miles in extent, and in the vicinity of Charleston in South Carolina.

The word "tæda," properly speaking, signifies *torches* in general, for which the timber of this species is well suited and much used in the Southern States of the Union, where it is called the "Frankincense Pine" and "Oldfield Pine," by the inhabitants; for when any piece of clear land is neglected for any length of time, it is speedily covered with this kind. Hence the name of "Oldfield Pine."

No. 54. PINUS TEOCOTE, *Schiede*, the Candle-wood Pine.

Syn. Pinus Besseriana, *Roezl.*
" " microcarpa, *Roezl.*
" " Mulleriana, *Roezl.*
" " Vilmoriniana, *Roezl.*
" " Galocote, *Roezl.*
" " Hugelii, *Roezl.*
" " Kegelii, *Roezl.*
" " interposita, *Roezl.*
" " tumida, *Roezl.*

Leaves in threes, from three to five inches long, compressed, erect, rigid, sharp-pointed, twisted at the base, light green, channelled on the inner side, and convex below; sheaths one inch long, persistent, jagged at the margin, but much shorter on the old leaves. Branches rather stiff, and very leafy; buds imbricated, and free from resin. Cones ovate-oblong, tapering to a point, smooth, drooping, two inches and a half long, and one inch across, rounded at the base, and with rather a long foot-stalk. Scales half an inch across, irregularly four-sided, slightly elevated, widened at the apex, and much depressed, but without any spine or point in the centre. Seeds very small, with wings rather more than half an inch long.

A tall tree, growing 100 feet high, and three or four feet in diameter, on the high lands of Mexico, particularly on the sloping sides of the mountains of Orizaba and Real del Monte. It is also plentiful on the mountains in the State of Oaxaca at an elevation of from 5500 to 8000 feet above the sea.

It is the "de'ocote" or "Pino de'ocote" (candle wood) of the Mexicans.

Timber durable and full of resin.

It is tolerably hardy.

No. 55. Pinus tuberculata, *D. Don*, the Tuberculated Coned Pine.

Syn. Pinus Californica, *Hartweg.*

Leaves in threes, thickly set on the branches, bright green, rather stiff, broad, and flat, with an elevated rib running along their middle on the inner side, and from four and a half to five inches in length; sheaths short, smooth, and not more than half an inch long on the young leaves, but very much shorter on the older ones, and only partially persistent. Seed-leaves on the young plants from seven to eight in number, rather slender, and not very long. Branches not very stout, rather numerous, and irregular, with a roughish bark; buds below the middle size, imbricated, and not very resinous or pointed. Cones mostly in clusters of four, but sometimes solitary or in pairs, and only produced on the main stems; of a long, conical shape, five inches in length, and two broad, the outer surface curved, the inner straight, widest near the base, and gradually tapering to the point, quite sessile, and uneven-sided at the base, very hard, of a light-brown colour, or silvery-gray when old, very glossy, and full of resinous matter; they stand off at nearly right angles when old, although rather pendulous when young, and remain on the tree for years, without even opening or shedding their seeds. Scales largest and most developed at the external base, and down three parts of the outer side of the cone, deeply divided, much elevated, horizontally, and rather conical, particularly those near the base, the largest of which is three-eighths of an inch wide, terminated by a strong, sharp prickle; but as they approach towards the point of the cone, they become much less elevated, more quadrangular, and blunter pointed: the scales on the inner side of the cone and round the point are very much smaller, and quite flat, with a small, dark-brown prickle in their centre; each cone contains fifteen or sixteen rows of scales, within each of which are two very small seeds, with wings three-quarters of an inch in length.

This pine was first discovered by Dr. Coulter, to the south of Monterey, near the level of the sea, and growing almost close to the beach, intermixed with Pinus radiata. Mr. Hartweg found it growing on the Santa Cruz Mountains, sixty miles to the north of Monterey by land. It is a tree of slow growth, and seldom attains more than 30 feet in height, with a trunk eight or ten inches in diameter. Mr. Jeffrey found it at an elevation of 5000 feet, with the cones adhering to the tree; in several instances with twenty whorls of cones on the trunk, the growth of as many years,—the branches being covered with them in the same way as the trunk.

The timber is red and hard, and the tree of a conical form, growing about 40 feet high, in poor sandy soil.

It is quite hardy.

NEW OR DOUBTFUL KINDS, HAVING THE LEAVES THREE IN A SHEATH, AND OF WHICH NOTHING MORE IS KNOWN.

No. 56. PINUS DEFLEXA, *Torrey*, the Deflexed-scaled Pine.

Leaves in threes, slender, and from six to seven inches long, with short sheaths. Cones oval-pointed. Scales pyramidally developed, protuberance large and recurved.

A tree of moderate size, with the stem covered with smooth bark, found by Emeroy on the high Cordilleras of California.

No. 57. PINUS PSEUDO-TÆDA, *Tenore,* the False Tæda Pine.

Leaves slender, rigid, and from four to six inches long, with fringed sheaths one-third of an inch long. Cones oval, solitary, and two inches long and one inch broad. Scales pyramidal, depressed, and with a straight or slightly curved awn one line long.

This kind, according to Professor Tenore, differs from Pinus Tæda in the leaves being more slender and the cones much smaller. (Probably Pinus serotina.)

Section III. QUINÆ, OR THOSE KINDS HAVING FIVE LEAVES IN EACH SHEATH.

No. 58. PINUS APULCENSIS, *Lindley,* the Apulco Pine.

Syn. Pinus Acapulcensis, *Don.*
„ „ Zacatlana, *Roezl.*
„ „ Astecaensis, *Roezl.*

Leaves in fives, slightly curved, slender, blunt-pointed, six inches long, much undulated, and of a deep glaucous green. Sheaths rather long, silky, and imbricated. Branches short, rather robust, irregular, few, ascending at the points, and of a glaucous violet colour on the younger parts. Cones ovate-conical, widest at the base, four inches long, and two inches and a half wide near the base; glossy, pendulous, and growing in whorls; surface very hard, and full of resinous matter. Scales very rugged, unequally four-sided, pyramidal, straight, or sometimes prolonged into a curved beak, particularly those nearest the base; the larger ones measuring three-quarters of an inch across. Seeds rather small, with oval-shaped wings one inch long.

A tree attaining a height of 50 feet, and inhabiting the ravines in the mountains near Apulco in Mexico, where it was first discovered by Mr. Hartweg in 1839. Roezl found it on the Sierra of Zacatlan, at an elevation of 7000 feet, forming a beautiful tree 60 feet high.

It is rather tender.

No. 59. PINUS ARISTATA, *Engelmann*, the Awned-cone Pine.

Leaves in fives, thickly set all round the branches, three-sided, abruptly-pointed, entire on the edges, bright green on both sides, mostly with numerous exudations of a white resin on their surface, and rising from the axils of ovate, acuminate, brittle, light-brown scales, which are more persistent than the leaves themselves, and cover the branches with their rough, blackish remains; on young and very robust trees the leaves are more or less curved upwards, and from one inch and a quarter to one and three-quarters long and half a line wide; but on old and stunted trees they are scarcely an inch long, quite straight, very spreading, and so thickly placed all round the branchlets as to give them the appearance of so many bottle brushes. The sheaths on the young leaves are from three to four lines long, and consist of seven or eight oblong-pointed, adpressed scales, with fringed margins, which soon become spreading, squarrose, and fall off in the second year; many lanceolate scales also sheathe the lower part of the young shoots, and Engelmann states that he has seen branches with sixteen spaces, where male flowers grew, which proved that the leaves were persistent for that number of years. Branches spreading, often contorted, and covered with a smooth thin bark, full of large vesicles, containing a clear fluid balsam, which remains between the layers of the old bark. The stems and larger branches of old trees are frequently covered with young shoots, like those of Pinus Tæda, the female aments, or young cones, bristling with their slender, lanceolate, aristate, erect scales, are produced singly or two together near the ends of the young shoots, and of a dark purple colour. Cones oval, blunt-pointed, purplish-brown, often covered with resin as if varnished, and from two inches and a quarter to two and three-quarters long and about one inch and a half broad. Scales rhomboid, half an inch long and one-third of an inch wide, with the transverse ridge rather flat; protuberance very conspicuous, with the slender mucro or awn, from the small rhombic. Central mucro two or three lines long, curved upwards at first, but afterwards tortuose and easily broken off. Seeds nearly three lines in length, with obovate wings six or seven lines long. Cotyledons or seed-leaves seven in number.

This very singular pine is a truly alpine species, characterizing the highest belts of timber on the peaks of the Colorado Mountains in California; where on sheltered slopes, at elevations between 9000 and 10,000 feet, it forms a tree from 40 to 50 feet high, with a stem from one to two feet in diameter, covered with a thin, scaly, light-grayish-brown bark, not more than three or four lines thick, even on old trees; but on the high bleak mountains of the Snowy Range, on Pike's Peak, and on the heights of the Coochetopa Pass, at an elevation of from 10,000 to 12,000 feet, it becomes a straggling bush, frequently prostrate or almost creeping, and thickly covered with cones. It, however, never descends to a lower elevation than 9000 feet. The wood is white, tough, and not very resinous.

It was first introduced in 1870, by Mr. Cripps, Nurseryman, at Tunbridge Wells.

No. 60. PINUS AYACAHUITE, *Ehrenberg,* the Ayacahuite Pine.
Syn. Pinus strobiliformis, *Wislizenus.*

Leaves in fives, three-edged, slender, but rather stiff, flat on the back, with a sharp projecting mid-rib and two furrows on the inner face; from three to four inches long, straight, very glaucous on both sides, and whitish when young, with a few wide serratures near the points. Sheaths short, scaly, membranaceous, and soon curling up and falling off. Branches rather slender, regularly in whorls, spreading, numerous, and covered with a glossy smooth grayish bark. Cones very long and slender, being from 10 to 12 inches in length, and three inches broad at the base, and tapering regularly to a sharp point, which is slightly incurved towards the upper part, they are full of resinous matter, and pendent from the extremities of the top branchlets. Scales projecting at the ends, bent downwards, and recurved at the points, two inches long, diminishing to a point at the apex; thin, wrinkled, lengthways, standing free, and of a pale yellowish-brown colour. Seeds with broad wings one inch long.

A large tree, growing 100 feet high, and three or four feet in diameter, with very much the appearance of the Weymouth Pine (P. Strobus), found in the provinces of Chiapa and Oaxaca in Mexico, particularly on the higher points of the Combre Mountains in the Sierra of Oaxaca, and on the Mount Pelado or bald-mountain. It is also very common on the mountains of Quezaltenango, at an elevation of 8500 feet, and on the neighbouring mountain of Santa Maria, where it is called "Tablas" by the inhabitants, and "Ayacahuite" by the Mexicans. It is also found on the higher peaks of the mountains about Cosiquiriachi, in Northern Mexico, at an elevation of 7000 or 8000 feet.

Timber white and soft.

It is tolerably hardy.

No. 61. PINUS BALFOURIANA,* *Jeffrey*, Dr. Balfour's Pine.
Syn. Pinus Parryana, *Parlatore.*
„ „ quadrifolia, *Parry.*

Leaves mostly in fours, but sometimes in threes, fours, and fives on the same shoot, very dense, short, stout, glaucous below, and rigid; curved inwards, blunt-pointed, quite entire, convex on the back, concave on the inner face, resinous, and from one to one inch and a quarter long on the adult plants. Sheaths composed of numerous long jagged scales, which soon fall off, and leave the base of the leaves naked. Branches pendulous and flexible. Bark smooth and of a reddish colour. Cones dark brown, from four and a half to five inches long, and rather more than an inch in diameter, tapering regularly towards the point, slightly curved, mostly solitary, pendent on the points of the branches, and full of resinous matter. Scales from one inch and a half to one and three-quarters long; the larger ones six lines broad, thin, flattened, slightly thickened towards the points, four-sided, and concave; smaller ones near the base, sometimes partially sunken in the centre, and terminated by a dark brown umbo or scar. Seeds middle-sized, beautifully dotted, and with ample wings one inch long.

---

* A figure and description of this pine was first given in the Proceedings of the Oregon Committee in 1854, under the name of P. Balfouriana.

A fine tree, growing 80 feet high, and three feet in diameter, with an ample head; found by Mr. Jeffrey on the mountains in Northern California, between Shasta and Scots Valley, at an elevation of from 5000 to 8000 feet, growing on volcanic débris. Dr. Parry found it at San Diego in California.

It is quite hardy, and very distinct.

No. 62. PINUS BUONAPARTEA, *Roezl*, the Buonaparte Pine.

Syn. Pinus Veitchi, *Roezl.*
" " Durangensis, *Roezl.*
" " hamata, *Roezl.*
" " Ayacahuite Blanco, *Roezl.*

Leaves in fives, but sometimes six, seven, eight, and nine are found in the same sheath; of a glaucous-green colour, angular on the inner face, very slender, and five inches long. Sheaths composed of long linear-pointed scales, which soon curl up and fall off. Branches curved, lateral ones more or less pendent, on account of the large cones being produced on their extremities. Cones straight, nearly cylindrical, 10 or 12 inches long, and three or four inches in diameter. Scales from one inch and three-quarters to two inches broad, and rather more than half an inch long on the exposed part; reflected, and strongly hooked backwards at the ends, thickest in the centre, with several elevated lines on the surface, and tapering to the point, which is much reflected, and half an inch long. Seeds large, with broad wings one inch long.

A noble tree, growing 130 feet high, with a straight trunk, furnished with long slender branches, in regular whorls, and pendent branchlets two or three feet long, which give the tree a most perfect and elegant appearance.

It is found growing in the department of Durango, on the Sierra Madre, a chain of mountains situated between the Table Land and Gulf of Mexico, where it is known by the name of "Pino Real," or Royal Pine, a name due to its great size and majestic appearance. It is also found on the eastern side of Popocatepetl, at an elevation of from 11,000 to 12,000 feet, and like Pinus Lambertiana, it produces a resinous substance, which when dried and pounded becomes a kind of ash-coloured powder, very sweet, and eaten by the inhabitants instead of sugar.

It is tolerably hardy.

No. 63. PINUS CEMBRA, *Linnæus*, the Swiss Stone Pine.

Syn. Pinus Cembra Helvetica, *Loddiges.*
" " " vulgaris, *Endlicher.*
" " " stricta, *Hort.*
" " Montana, *Lamarck.*
" " sativa, *Amann.*
" " sylvestris Cembra, *Matthiola.*
" " " altera, *Dodon.*
" " Aphernousli, *Loudon.*

Leaves in fives, from two to three inches long, sharp-pointed, three-ribbed, one of them green and shining, and the other two white and opaque. Sheaths deciduous. Buds broad, globose, with a long narrow point, whitish, without resin, and mostly solitary at the ends of the shoots. Cones about three inches long, and two inches and a half broad, ovate, erect, and of a violet colour. Scales one inch broad, and the same in the widest part, slightly hooked, and not thickened at the point, but blunt; those nearest the base much smaller and recurved. Seeds very large, wingless, and eaten in Switzerland.

An erect tree, of a bluntish pyramidal shape, regularly furnished with branches down to the ground, thickly clothed with foliage, and attaining a height of 50 feet. Timber very soft, but very fine in the grain; fragrant and resinous.

This tree is found in the highest regions of the Alps, from the Tyrol to Mount Cenis, between 4000 and 6500 feet of elevation. It is also found on the northern slope of the Alps, from Austria to Savoy, and Dauphine, and occurs on the Carpathian Mountains, and on the Altai.

It is the "Aphernousli" Pine of the Tyrolese, the "Aralla" of Savoy, and the "Arth" of Northern Italy and the Bernese Oberland mountaineers. The Russian "Kedrovoi" has probably been misapplied to this tree; as the Cedar is nowhere indigenous to Russia, and, consequently, could not have an original Sclavonic designation. The varieties are:—

PINUS CEMBRA MONOPHYLLA, *Carrière*, the One-leaved Cembra Pine.

This very singular variety of the Siberian Stone Pine has much slenderer branchlets, and the leaves so compressed, or adhering together along their whole length, in each sheath or set, as to appear but one leaf.

It is of French origin, and very curious.

PINUS CEMBRA SIBIRICA, *Loudon*, the Siberian Stone Pine.

Syn. P. Cembra Rossica, *Hort.*
" " Mandschurica, *Regel.*
" " excelsa, *Maximo.*

Leaves in fives, much shorter, more dense and of a brighter green than those of the Swiss variety, with the cones longer, but not so broad, and a tree of much slower growth; but according to Pallas a lofty tree destitute of branches a considerable way up the trunk, and which sometimes attains a height of 100 feet, but is never found beyond the River Lena in Eastern Siberia.

Seeds large, and eatable in Siberia.

PINUS CEMBRA PYGMÆA, *Fischer*, the Dwarf Cembra Pine.

Syn. Pinus Cembra pumila, *Endlicher*.
„ „ pygmæa, *Fischer*.
„ „ Cembra nana, *Hort*.
„ „ „ humistrata, *Madden*.

A very dwarf variety, seldom growing more than two or three feet high, with a scrubby appearance, and at times assuming a creeping form on the ground, with the leaves very much shorter and more crowded. Cones extremely small, nearly round, and bright purple when full grown. Scales very small, thin, rather recurved and pointed. Seeds wingless, and very small of their kind. It is found in Eastern Siberia, covering rocks where no other vegetation grows, and in valleys, where it grows much stronger, but never attains the size of a small tree. It grows on the eastern slope of the Ural Mountains towards the Lena, where it is called the elastic Stone Pine, or Spreading Cedar of Eastern Siberia, and has several stems, sometimes 12 feet long and three inches in diameter; erect in summer, but completely prostrated by the snow in winter. The cones are but half the size of those of the Swiss kind, but the nuts are equally good flavoured.

PINUS CEMBRA VARIEGATA, *Hort.*, the Variegated Cembra Pine.

This is a very ornamental variety, with an equal portion of its leaves of a pale straw colour.

No. 64. PINUS CORNEA, *Roezl*, the Horn-shaped Coned Pine.

Leaves in fives, rather long, and slender. Cones somewhat like those of Pinus Pseudo-Strobus, long, recurved, tapering from the base to a small point, quite firm, and resembling a small cow's-horn. It is found on the Popocatepetl, in Mexico, at an elevation of from 10,000 to 11,000 feet.

It appears to be quite new, and distinct.

No. 65. PINUS DEVONIANA, *Lindley*, the Duke of Devonshire's Pine.

Syn. Pinus Blanco, *Knight.*
„ „ magnifica, *Roezl.*
„ „ Ocampi, *Roezl.*
„ „ „ Devoniana, *Roezl.*
„ „ Thibaudiana, *Roezl.*
„ „ Zitacuaria, *Roezl.*

Leaves in fives, very long, but rather slender and pendulous, of a beautiful deep shining grass-green, from eight to nine inches long, and rather sharp-pointed. Sheaths very long, rough at the end, imbricated, and one inch long. Branches very robust, few, and very irregular, and like those of the Swarp Pine of the United States (P. palustris). Cones from nine to ten inches long, and three inches in diameter near the base, tapering to a blunt point, three-quarters of an inch wide, solitary, pendulous, curved, blunt-pointed, and not very firm or hard on the surface. Scales rather thin, one inch broad, but smaller towards both ends, rounded at the top, and irregularly four-sided, with a slightly elevated transverse line and projecting point in the centre, which is depressed and smooth. Seeds rather small, with the wings nearly one inch and a half long.

A large tree, growing from 60 to 80 feet high in the mining districts of Mexico, on the mountains of Ocotillo, between Real del Monte and Regala, and on the "Cumbra," or highest point of the mountains. It is called by the inhabitants "Pino Blanco," or the White Pine, on account of its timber being that colour, and "Pino-real," or Royal Pine, on account of its noble appearance and splendid long foliage.

Mr. Hartweg first discovered it in Mexico in 1839.

It is tolerably hardy.

No. 66. PINUS EXCELSA, *Wallich*, the Lofty Bhotan Pine.

Syn. Pinus Dicksonii, *Hort.*
„ „ Chylla, *Loddiges.*
„ „ pendula, *Griffith.*
„ „ Strobus excelsa, *Loudon.*
„ „ „ Nepalensis, *Hort.*
„ „ Strobus, *Hamilton*, not *Linnæus.*
„ „ Indica, *Manetti.*

Leaves in fives, very long, three-edged, very glaucous on the inner faces, bluish-green and rounded on the outer one; from six to eight inches long, very slender, and mostly drooping. Sheaths short at first, but soon rolling up, and finally falling off. Branches in regular whorls and spreading, those near the bottom reflected, while the upper ones are more or less ascending; branchlets slender, long, and spreading; male flowers in dense clusters. Cones solitary, or sometimes two or three together round the leading shoots, of a cylindrical or somewhat conical shape, from six to nine inches long, and two inches broad near the base, tapering towards the point, and with a foot-stalk nearly one inch long; when young of a pea-green colour, and somewhat erect, but when fully grown completely pendulous, and of a pale brown colour, full of resinous matter in the shape of transparent drops. Scales thickened at the ends, but without any extended or curled points, loosely imbricated, oval, blunt-pointed, thin, smooth, and nearly all of a size, being one inch and a quarter long, and about one inch in breadth. Seeds rather small, with wings one inch and a quarter long.

A large tree, principally found in Nepal, where it prefers the more open and cheerful aspects of the mountains. In Bhotan it forms large and beautiful woods on the southern slopes, at an elevation of from 6000 to 10,000 feet, but stunted at the last elevation. It is not found in Sikkim, but is common at Simla on warm aspects, and is found in abundance all over the interior from 6000 to 8000 feet of elevation, and as high as 11,500 feet in Kamaon, occurring above the Deodar. In Nepal it attains an immense height, some trees being 150 feet high near the Shatool Pass, and below Chansoo, in Kunawur, with long horizontal branches, for the most part clothed to near the ground, but inclining upwards so as to form a spreading cone, rather than a large spreading head.

It is one of the most common Pines of the central zone throughout the whole Himalayas. Dr. Griffith states its most eastern limits to be Bhotan, where it is called "Lumshing," and its most western locality to be on the mountains of Kafiristan, near Jalalabad, where it is called "Piunee." It has not hitherto been met with in Sikkim, and appears to be wholly wanting in Central and N.W. Kamaon, but is the uppermost and only Pine met with in the ascent to the Neetee Pass in Gurhwall, at an elevation of 11,000 feet, and on both the north and south faces of the Lamakaga Passes; while, according to Capt. Gerard, its superior limit on the snowy range of Leem is at an elevation of 12,000 feet, and its lowest one, near Deorah, in Joobul, only 5000 feet, thus fixing the extreme limits of Pinus excelsa at from 5000 to 12,000 feet of elevation. Again, Mr. Winterbottom traced it to the mountains of Gilgit, beyond Cashmere, its most northern habitat hitherto ascertained, as Bhotan is its most southern, and Jalalabad its most western limits.

This is the "Kail," or "Kaeel" (sort of Pine), of the hill people about Simla, the "Leem," of Kunawur, and the "Yari," of Cashmere; also the Weeping Fir of the Himalayan travellers, and the Chylla, or Cheel, of Kamaon and Gurhwal.

Timber soft, white, and remarkably compact, producing in great abundance a highly fragrant resinous turpentine.

Dr. Wallich and some other travellers mention what they consider varieties of this Pine, some with shorter, others with greener leaves, and others with stiffer foliage, but all such varieties no doubt arise from climate and elevation.

This tree flowers about the end of May, and the cones require eighteen months to mature.

No. 67. Pinus filifolia, *Lindley*, the Thread-leaved Pine.
Syn. Pinus Skinnerii, *Forbes.*
„ „ Aztecaensis, *Roezl.*
„ „ bullata, *Roezl.*
„ „ Hendersoni, *Roezl.*
„ „ Jostii, *Roezl.*
„ „ Keteleeri, *Roezl.*
„ „ Michoacaensis, *Roezl.*
„ „ nitida, *Roezl.*
„ „ Ocote, *Roezl.*
„ „ vallida, *Roezl.*
„ „ Van-Geerti, *Roezl.*
„ „ Zamoraensis, *Roezl.*

Leaves in fives, from twelve to fourteen inches long, acutely triangular, of a dull green colour, rather stout, and curved outwards, particularly the older leaves. Sheaths long, smooth, and persistent, or not falling off. Branches few, irregular, and very robust, resembling those of the Swamp Pine of America, and densely clothed with its beautiful long leaves. Cones elongated, or conical, tapering from the base to a blunt point, seven or eight inches long, with a smooth and rather hard surface. Scales one inch across, rather equally four-sided, depressed, and pyramidal in the centre, terminated by a hard blunt point. Seeds middle sized, with the wings one inch and a quarter long.

A very handsome tree, growing from forty to sixty feet high, abundant in Guatemala, particularly near Santiago, and on the "Volcan del Fuego," in exposed places, and on the mountains near Guatemala (City). It is also found growing on the Sierra of Zacatlan, on the road between Mexico and Tampico, at an elevation of 7000 feet; a tree sixty feet high, with a most beautiful appearance on account of its short branches, being furnished with long, curved leaves, bending in a graceful, plume-like manner at the ends of the shoots.

It is very tender, and produces a light white timber of little value.

No. 68. PINUS FLEXILIS, *Torrey*, the Pliable-branched Pine.
Syn. Pinus Lambertiana brevifolia, *Hooker*.
„ „ albicaulis, *Engelmann*.
„ „ Shasta, *Carrière*.

Leaves in fives, but sometimes in twos, threes, fours, and fives, on the same branch; short, stout, rigid, curved, blunt-pointed, quite entire, stoutly keeled on the inner face, rounded on the outer, and from two to three inches long on the adult plants. Sheaths composed of numerous, long, membranaceous, loose scales, which soon fall off and leave the base of the leaves naked. Branches horizontal, very stout, and much contorted. Cones ovate, rounded at the base, two inches and three-quarters long, and nearly two inches in diameter at the widest part, and full of resinous matter. Scales projecting into a thickened pyramidal elevation, transversely keeled, and terminating in a short, broad, incurved scar. Seeds large, oval, and wingless.

A small tree, growing from thirty to sixty feet high in Northern Mexico and California, the seeds of which are eaten by the Indians.

It has an extensive range, being found on the mountains along the Fraser River, and on the Shasta Mountains in Northern California; also on the mountains about the head waters of the Platte, Yellow Stone, Missouri, and Columbia Rivers, and on the mountains above Santa Fe in New Mexico.

Mr. Jeffrey found it on the summit of a mountain near Fort Hope, on Fraser's River, and on the Shasta Mountains, growing on granite rock, where the soil is scant. It is most abundant at an elevation of from 8000 to 9000 feet, but ascends to 14,000 feet; at its lowest elevation, when first it makes its appearance on the mountains, it is a small tree forty feet high and one foot in diameter, with a wide spreading top, the branches being very stout, and much contorted, but dwindling down to a small shrub, on the upper part of the range not more than three feet high, of a tabular form, and so compact that a person could walk along the top of it. It is the White Pine of the Rocky Mountains.

PINUS GORDONIANA. See page 305.

No. 70. PINUS GRENVILLEÆ, *Gordon*, Lady Grenville's Pine.

Leaves in fives, 14 inches in length on the wild specimens, very robust, three-edged, thickly set on the branches, dark green, and very much resembling those of Pinus macrophylla, but rather longer. Sheaths persistent, or not falling off, nearly one inch and a half in length, rather rough, and scaly. Seed-leaves on the young plants mostly ten in number, and rather long. Branches mostly solitary, rarely in pairs, irregularly placed, and very robust. Buds very large, imbricated, non-resinous, and thickly set with long narrow brown scales. Cones pendulous, solitary, stalkless, quite straight, tapering regularly from the base to the point, 16 inches in length, and three inches and a half broad at the base, with from twenty-eight to thirty rows of scales. Scales nearly all of a size, six-eighths of an inch broad, and slightly elevated, and blunt, particularly towards the base, from which a small portion of clear resin sometimes exudes. Seeds about the ordinary size, with mostly, but not always, bifid wings, which are rather broad, and more than an inch in length.

This noble Pine is called "Ocote Mache," or Male Pine, by the inhabitants, on account of its robust habit, and is found plentiful on the highest parts of the Cerro de San Juan, a range of mountains to the south-west of Tepic, chiefly composed of crumbled pumice-stone, of volcanic origin, and which at a distance gives the place a whitish appearance.

Mr. Hartweg found it growing on the Cerro de San Juan, or Saddle Mountain, near Tepic, in Mexico, attaining a height of from 60 to 80 feet. The timber is white, soft, and not very durable.

It has been named in compliment to that excellent patron of Conifers, the late Lady Grenville, of Dropmore.

It is tender.

No. 71. PINUS HARTWEGII, *Lindley,* Hartweg's Pine.

Syn. Pinus Aculcensis, *Roezl.*
„ „ Amecaensis, *Roezl.*
„ „ atrovirens, *Roezl.*
„ „ corrugata, *Roezl.*
„ „ frondosa, *Roezl.*
„ „ Geitneri, *Roezl.*
„ „ Iztacihuatli, *Roezl.*
„ „ Krelagi, *Roezl.*
„ „ Papeleui, *Roezl.*
„ „ resinosa, *Roezl.*
„ „ scoparia, *Roezl.*
„ „ Standishi, *Roezl.*
„ „ suffruticosa, *Roezl.*
„ „ Tlamacaensis, *Roezl.*

Leaves in fives, but not unfrequently in fours, very dense, six inches long, rather slender, curved, and of a dark green colour. Sheaths long on the young leaves, but with a shrivelled appearance on the old ones, and jagged at the ends. Branches few, very robust, and irregularly placed on the stem. Cones growing in clusters, pendulous, four or five inches long, and nearly two inches broad; oblong, tapering to the point, which is rather blunt, incurved, and of a deep purple colour when young, and dark-brown when fully matured. Scales flattened, broader than long, four-sided, rather thin, with a projecting or elevated short point in the centre, but much smaller towards the extremities; narrower, and more elevated near the apex. Seeds middle size, with very short wings, not more than three-quarters of an inch long.

A handsome tree, growing from 40 to 50 feet high, with a dense compact head, of a fine dark green, found by Mr. Hartweg on the Campanario Mountain, in Mexico, at an elevation of 9000 feet, and beginning to appear where the Oyamel (Picea religiosa) ceases to grow, on the mountain. It is also found on the mountains of Orizaba, and near Real del Monte, at an elevation of 10,000 feet, and 100 feet high.

The timber is excellent, and very durable, containing a large quantity of resinous matter, and of a reddish colour.

It is tolerably hardy.

No. 69. Pinus Gordoniana, *Hartweg*, Gordon's Mexican Pine.

Leaves in fives, sixteen inches long, rather slender, three-edged, very dense, light green, and longer than any of the other kinds. Sheaths persistent, or not shedding, about one inch and a quarter in length, rather rough, and scaly. Seed-leaves on the young plants mostly seven in number, and rather short. Branches rather numerous, at regular distances, slightly elevated at the points, and not very robust. Buds very scaly, non-resinous, and of a moderate size. Male flowers rather large, oblong, in dense clusters, and very numerous. Cones pendulous, mostly solitary, slightly curved, and tapering regularly from near the base to the point, from four to five inches long, and one inch and a half broad near the base, with fourteen or fifteen rows of scales. Scales half an inch broad, slightly elevated, particularly those about the middle and towards the point, while those next the base are nearly flat, and much smaller. The cones are quite destitute of resin, and on foot-stalks about half an inch long. Seeds small, angular, with narrow wings about one inch and a quarter in length.

This kind forms a handsome tree from sixty to eighty feet high, and has the longest and finest foliage of any kind yet known. It was first discovered by Mr. Hartweg on the Cerro de San Juan, or Saddle Mountain, near Tepic, in Mexico, where the inhabitants call it "Ocote Hembra," or Female Pine, on account of the numerous cones which it produces.

It is very tender in England.

No. 72. PINUS KORAIENSIS, *Siebold*, the Corean Pine.

Syn. Pinus Strobus, *Thunberg*, not *Linnæus.*

Leaves in fives, from three to four inches long, slender, thread-shaped, glaucous, pointed, but not very acute, flat on the back, but stoutly angled or keeled on the inner part, and three-edged. Sheaths composed of long, transparent, very entire scales, which soon fall off, and leave the base of the leaves naked and jutting out. Buds linear, oblong, and composed of eight or ten scales, of which the outer ones near the base are shortest and obtuse; those of the inner and uppermost ones longer, linear, loosely spreading, membranaceous, entire, and dropping off before the leaves are fully grown. Branches spread out, horizontal, rounded and covered with a smooth, ashy-brown-coloured bark; lateral ones slender, short, and when young quite downy, and covered thickly with bright glaucous leaves, which remain on the branches for three years. Cones straight, almost sessile, ovate-cylindrical, obtuse at the ends, swelling in the middle, and from four to five inches long and two broad. Scales numerous, wedge-shaped at the base, rhomboid, reflected on the apex, leathery, smooth, woody, wrinkled lengthways, and yellowish-brown in colour, with the edges wavy and incurved. Seeds thick, obovate, a little flattened, and somewhat angular. Shell hard, smooth, and of a grayish-brown colour. Seed-leaves from eleven to thirteen in number.

A tree growing from 30 to 40 feet high, rarely found wild in China or Japan, but much cultivated in gardens, where it rarely exceeds 12 or 14 feet in height. It is found growing along the sea-coast on the peninsula of Corea, and about the bay of St. Peter and St. Paul in the Island of Koraginsk, where the seeds are eaten by the people along the coast.

The Japanese call it "Wumi-matsu" (Sea-coast Pine), and the Chinese name it "Hai-sung-tse," which also means Maritime Pine.

No. 73. Pinus Lambertiana, *Douglas,* Lambert's Pine.

Leaves in fives, four inches and a half long, rather stiff, of a dull, but not shining green colour, rather rough at the edges, and slightly glaucous when young. Sheaths very short, or nearly wanting in the old leaves. Branches in whorls, numerous, and rather pendulous towards the extremities, and densely clothed with foliage. Cones very large, from 12 to 16 inches long, and four inches in diameter; deep brown, cylindrical, tapering to the point, mostly straight, and destitute of resinous matter; pendulous when full grown, although nearly erect when young. Scales roundish on the upper part, rather flat, neither elevated nor projecting, and only loosely pressed on each other, nearly one inch and a half broad in the larger ones, which are near the middle of the cone, but much smaller in those near the extremities; those near the base being rather open, incurved, and more pointed. Seeds large, oval, seven-eighths of an inch long, and with the wings one inch and three-quarters long, and dark-brown. They require two years to ripen, are very pleasant to taste, and are used for food by the Indians, as well as the gum-resin, which is freely produced by the tree when set on fire, as a substitute for sugar.

A gigantic tree, growing from 150 to 200 feet high, and from 20 to 60 feet in girth near the ground, with a straight stem 100 feet clear of branches, and an open pyramidal head.

It is found extending over a large tract of country, but intermixed with other firs, in the northern parts of California, and in North-west America, at a distance of 100 miles from the sea, attaining its greatest diameter when growing in pure sand.

The Sugar Pine is found in almost unlimited numbers along the whole length of the Sierra Nevadas, of large size, and valued very highly for its timber; and excellent resin and turpentine are produced by the tree in the Butta Yerba and Nevada counties.

No. 74. PINUS LEIOPHYLLA, *Schiede*, the Smooth-leaved Mexican Pine.

Syn. Pinus Cedrus, *Roezl.*
„ „ Comonforti, *Roezl.*
„ „ Decandolleana, *Roezl.*
„ „ dependens, *Roezl.*
„ „ Ehrenbergii, *Endlicher.*
„ „ gracilis, *Roezl.*
„ „ Huisquilucaensis, *Roezl.*
„ „ Lerdoi, *Roezl.*
„ „ Monte-Allegri, *Roezl.*
„ „ verrucosa, *Roezl.*

Leaves in fives, very slender, partially three-sided, sharp-pointed, smooth, and drooping, of a pale glaucous green; from four to five inches long, closely set on the ends of the branches, and frequently growing from the stem and older branches in tufts. Sheaths short, shrivelled, and almost disappearing on the older leaves. Branches numerous, slender, and pendulous towards the extremities. Buds imbricated, and non-resinous. Cones small, ovate-pointed, two inches and a half long, and one inch and a quarter broad near the base; pendulous, flattened, or depressed at the base, and on short thick foot-stalks. Scales rather flattened, half an inch across, slightly depressed, but with a projecting sharp point in the middle, unequally four-sided, and of a dark colour. Seeds small and black, with wings nearly three-quarters of an inch long, and rather broad.

A large tree, with an open but regular conical head, well clothed with its vertical branches and drooping foliage, attaining a height of from 60 to 100 feet.

It is found in many parts of the colder regions of Mexico, on the mountains of Angangueo, at an elevation of 7000 feet. where it is called "Ocote Chino," from its abundance of resin, and on account of its being used for candles. The "Ocote Chino," or Candle-wood, is also found on the mountains, in the State of Oaxaca, attaining an immense size.

It produces a valuable timber, but so hard as to resist the plane.

It is rather tender.

No. 75. PINUS LINDLEYANA, *Gordon*, Dr. Lindley's Pine.

Syn. Pinus Montezumæ Lindleyi, *Loudon.*
„ „ rudis, *Endlicher.*
„ „ Endlicheriana longifolia, *Roezl.*
„ „ Richardiana, *Roezl.*
„ „ robusta, *Roezl.*
„ „ Decaisneana, *Roezl.*

Leaves in fives, very robust, and sharp-pointed, nine inches long, three-edged on the inner face, and rounded on the back; of a deep green, a little glaucous when young, and very thickly placed on the young shoots; older ones spreading or pendent, younger ones ascending. Sheaths more than an inch long on the young leaves, scaly, and a little wrinkled and jagged at the ends; older ones much torn, very short, rough, and loose. Branches very robust, curved upwards at the ends, and numerous; lateral ones stout, short, and twisted. Buds large, rather obtuse, and covered with close, light-brown, non-resinous scales. Cones from six to seven inches long, and two inches in diameter near the base, regularly conical, a little curved, and tapering to a regular point. Scales numerous, small, three-quarters of an inch across, regularly rhomboid, nearly flat, or slightly tuberculated on the top, or with a slightly-elevated transverse ridge across the centre, a little sunken in the middle, and furnished with a stout blunt prickle in the centre, of a dark-brown colour. Seeds small, with rather long narrow wings.

A superb tree, growing seventy or eighty feet high, with its branches and leaves in tufts, and very robust, forming a beautiful head, and one of the most elegant of Mexican Pines; found upon Mount Ajusco, in Mexico, at an elevation of 10,000 or 11,000 feet.

It is quite hardy, and very distinct from Pinus Montezumæ.

No. 76. Pinus lophosperma, *Lindley*, the Crest-seeded Pine.

Syn. Pinus Torreyana, *Parry*.

Leaves in fives, from eight to ten inches long, stout, stiff, and pungent at the points, with the sides rough, three-edged, and not unlike those of Pinus Coulteri. Sheaths on the young leaves upwards of an inch long, and smooth; while those on the old ones are little more than half that length, are torn at the ends, and much wrinkled along the surface. Shoots very stout, and covered, when young, with a white powder or glaucous bloom. Cones from four and a half to five and a half inches long, and rather more than three inches in diameter, somewhat globular or obtusely egg-shaped, tapering most towards the apex, and flattened at the base, with a hard, glossy surface, and very much resembling those of the Stone Pine (Pinus Pinea), but somewhat larger. Scales very thick at the points, rather large, elevated, glossy, hard, and distinctly two-edged, or irregularly four-sided; those nearest the base of the cone being very much the smallest, more recurved, and furnished with a short, stout point, which on the larger scales is obsolete. Seeds very large, and, like those of Pinus Sabiniana, furnished with a thick crest, of a dark colour, from which proceeds a very narrow, short, oblique, membranaceous wing, which, along with the crest, separates from the seed in the form of a horse's collar.

A magnificent tree, somewhat resembling Pinus Sabiniana, with very glaucous, stout shoots, found in Lower California by Mr. William Lobb, who transmitted seeds of it to Mr. Hugh Low, of the Clapton Nursery, in the early part of the year 1860.

It is more or less tender in England.

No. 77. Pinus Loudoniana, *Gordon,* Mr. Loudon's Pine.

Syn. Pinus Ayacahuite macrocarpa, *Hartweg.*
,, ,, ,, colorada, *Ehrenberg.*
,, ,, sp. like Ayacahuite, *Loudon.*
,, ,, Popocatepetli, *Roezl.*
,, ,, Don Pedri, *Roezl.*

Leaves in fives, and like those of Pinus Ayacahuite, very glaucous, but much stouter, from five to six inches long, and angular on the inner face. Sheaths composed of very long, linear, acute-pointed scales, which soon curl up and fall off. Branches in whorls, slender and horizontal, lateral ones long, very slender, little divided and drooping. Cones quite straight, and tapering to the point, from twelve to fourteen inches long, and from three to four inches in diameter a little above the base. Scales from one inch and three-quarters to two inches broad, and one inch long in the exposed part; slightly curved at the points in the upper ones, but much more so on those near the base of the cone, where they are sometimes quite reflected, and much narrower; thickest in the centre, and tapering to a broad more or less reflexed point, with several elevated lines on the surface. Seeds very large, with broad ample wings, one inch long.

A noble tree, rivalling Pinus Lambertiana, and growing 140 feet high, with a straight stem, furnished with long slender branches in regular whorls and pendent branchlets, two or three feet long.

It is found on the east side of Popocatepetl, in Mexico, at an elevation of from 11,000 to 12,000 feet; also at "Tenango," a beautiful tree, with large pendent cones at the points of the shoots, very much resembling Pineapples, and called by the Mexicans, "Pina." It is also called "Ayacahuite colorado," or Red Ayacahuite by the inhabitants, on account of its highly-esteemed timber, which is of excellent quality.

This kind is very distinct from the Pinus Ayacahuite, of Ehrenberg, as I pointed out several years ago in the "Gardener's Magazine," after examining cones belonging to the late Mr. Loudon, and collected by Mr. Charles Ehrenberg, in Mexico.

It has been named in compliment to the late J. C. Loudon, Esq., author of the "Arboretum Britannicum," the most valuable book of its kind ever published.

It no doubt will be quite hardy in the West of England, coming, as it does, from so great an elevation, and a cold climate.

No. 78. PINUS MACROPHYLLA, *Lindley*, the Long-leaved Mexican Pine.

Syn. Pinus Carrieri, *Roezl.*
„ „ Leroyi, *Roezl.*
„ „ Pawlikowskiana, *Roezl.*

Leaves in fives, very stout, fourteen or fifteen inches long, deep green, and slightly reflexed when full-grown, blunt-pointed and quite straight when young. Sheaths not very long, imbricated, and persistent. Branches very robust, not numerous, but rather regularly placed round the stem, and covered with a rough, scaly bark. Cones solitary, six inches long, and three inches broad at the base, very hard, elongated, straight, and regularly tapering to the point, with a thick but short foot-stalk. Scales greatly elevated, and hooked backwards, very hard and glossy, irregularly four-sided, broader than long, and one inch wide, but much narrower and more reflexed near the base, and straight-pointed near the summit.

A tree from 100 to 130 feet high, growing in the forests of Tulancingo in Mexico, at an elevation of 8000 or 9000 feet.

Mr. Hartweg found it but sparingly on the Ocotillo Mount, one of the highest points of the Angangueo Mountains in Mexico.

It is tolerably hardy in most parts, and a most beautiful kind, on account of its fine, ample foliage.

No. 79. PINUS MONTEZUMÆ, *Lambert*, Montezuma's Mexican Pine.

Syn. Pinus Occidentalis, *Humboldt and Bonpland*, not *Swartz.*
„ „ Endlicheriana, *Roezl.*
„ „ inflexa, *Roezl.*
„ „ Lowi, *Roezl.*
„ „ Wilsoni, *Roezl.*
(The Rough-barked Pine of Mexico.)

Leaves in fives, from three to four inches in length on the wild specimens, and on young plants from four to five inches long; rather stout, rigid, three-edged, and rough at the angles, thickly set upon the young branches, and supported by long, sharp-pointed, brown scales at the base of each sheath, of a dark green on the upper surface, and slightly glaucous on the under side, on the young leaves, but on old, full-grown leaves dark green on both surfaces. Sheaths persistent, or not falling off, nearly half an inch in length, and rather rough or jagged on the ends. Seed-leaves on the young plants from six to eight in number. Branches few, very irregular, rather stout, and twisted. Bark very rough, particularly on the young wood, which is covered with numerous long, broad, sharp-pointed scales. Buds few, imbricated, non-resinous, and rather lengthened. Cones in clusters of three or four together, but frequently single, nearly horizontal, from four to five inches in length, and one inch and three-quarters in the broadest part, which is near the middle, tapering to both ends, and slightly incurved, but especially towards the point, which is rather small. Scales small, and nearly equal in size, from sixteen to eighteen rows in depth, slightly elevated, and armed with a small prickle when young. Seeds small and winged.

This Pine is very distinct, both in cones and leaves, from the West India Pine, called P. Occidentalis by Swartz, a kind found in Cuba and other West India Islands, which is quite tender, and much smaller in its cones, and foliage, than the Mexican plant.

It is plentiful in different parts of Mexico. Hartweg found it on the mountains of Mexico, near Ajusco, forming a tree forty feet high. It is also found on the Mountain of Orizaba, at an elevation of 11,000 feet, growing from forty to sixty feet high. Timber resinous, and considered very good.

A hardy kind, with a spreading head.

No. 80. PINUS MONTICOLA, *Douglas*, the Mountain Pine.
Syn. Pinus Strobus monticola, *Nuttall*.

Leaves in fives, short, smooth, and blunt-pointed, from three to four inches long, rather three-sided, slender, deep glaucous-green, and with a silvery appearance when young. Sheaths short and imbricated. Cones long, slender, cylindrical, seven inches long, and one inch and three-quarters wide, tapering to rather a blunt point, smooth, and full of resin, generally in whorls, and on short foot-stalks. Branches rather stout, short, and densely clothed with foliage. Scales spoon-shaped, pointed, three-quarters of an inch broad at the widest part of the cone, and not closely pressed together,—the smaller ones at the base of the cone being much narrower, reflexed, pointed, and of a dark, yellowish gray. Seeds small, with rather narrow, hatchet-shaped wings, one inch and a quarter long.

A tall tree, growing 100 feet or more high, and from one and a half to two feet in diameter, with very much the appearance of the Weymouth Pine, but with a more dense head, and shorter and more glaucous leaves.

It is found abundantly in Northern California, on Trinity Mountain, at an elevation of 7000 feet, growing on granite rock on a very poor, scanty soil, and on the higher mountains at the Grand Rapids of the Columbia, and on the rocky banks of Spoken River. Timber white, fine-grained, and tough.

There is a variety with red-coloured cones, found on the banks of Spoken River.

It is quite hardy.

No. 81. PINUS OCCIDENTALIS, *Swartz*, the West India Pine.

Leaves in fives, bright green, from five to six inches long, rather angular, sharp-pointed, slender, but stiff, rather distant on the shoots, a little rough at the edges, and with a lanceolate, sharp-pointed scale, half an inch long, growing at their base. Sheaths smooth, entire, more than half an inch long, and persistent. Cones rather pendulous, three inches and a half long, and one inch and a half broad at the widest part, which is near the base; conical, and with rather a long foot-stalk, covered with sharp-pointed scales, like those growing at the base of the foliage. Scales swelled or thickened at their upper extremity, half an inch broad, and angular, with a scar on the summit, terminated by a small, straight, but very slender point; the scales are nearly all of a size, except a few near the base and the apex. Seeds very small, with short, narrow wings.

A small tree, with the appearance of the Aleppo Pine (P. Halepensis), thin of foliage.

It is a native of St. Domingo and Cuba, found plentiful in the quarter of Saint Suzanne, in St. Domingo, growing to the height of from twenty-five to thirty feet, and is easily distinguished by its lance-shaped scales at the base of each bundle of leaves on the younger shoots.

It is tender, and distinct from the Pine called "Occidentalis," from Mexico.

No. 82. PINUS OOCARPA, *Schiede*, the Egg-coned Pine.

Leaves in fives, from eight to ten inches long, slender, sharp-pointed, rather pendulous, and slightly angular, bright-green, and thickly set on the younger branches. Sheaths long, rather smooth, and persistent. Shoots rather slender, and pendulous at the extremities. Cones egg-shaped, solitary, broadest near the base, and tapering to a point, three inches and a half long, and two inches and a half broad near the base, with a very hard, shining surface of a pale, glossy, yellow colour, free from resinous matter, and with rather a long foot-stalk. Scales depressed, or bluntly pyramidal, three-quarters of an inch wide, with elevated bands from the centre to the corners, particularly towards the apex, and irregularly four-sided. Seeds middle-sized, with rather broad wings, one inch long. Seed-leaves seven or eight in number.

A small tree, growing from 40 to 50 feet high, with an ample spreading head, and rather pendulous branches, found on the volcanic mountain of Jorullo, and in other temperate parts of Mexico, in great abundance.

It is not hardy in England, and has the following variety :—

PINUS OOCARPOIDES, *Bentham*.

Syn. Pinus Skinnerii, *Hort.*

This is the Guatemala form of Pinus oocarpa, and only differs from it in having smaller and more pyramidal cones, and slenderer leaves than the Mexican plant. It is found plentiful in the pine tracts in various parts of Guatemala, particularly on the low ranges of "Choacus," in the province of Vera Paz, at an elevation of about 4000 feet; and although it descends nearly to the shores of the Bay of Honduras, it never occurs on the south coast, or at a higher elevation than 5000 feet above the level of the sea.

It is a beautiful tree, 50 or 60 feet high, but quite tender in England.

No. 83. PINUS ORIZABÆ, *Gordon*, the Orizaba Pine.

Syn. Pinus Antoineana, *Roezl.*

Leaves in fives, from eight to nine inches in length on the wild specimens, and rather longer on the young plants in cultivation, very slender, sharp-pointed, three-edged, thickly set on the branches, very rough at the edges, of a light but bright green colour, and much resembling those of Pinus Pseudo-Strobus. Sheaths persistent, or not falling off, about half an inch in length, rather smooth, and entire. Seed-leaves on the young plants from seven to eight in number. Branches numerous, spreading, rather irregular, slightly incurved, and slender. Bark rough. Buds large, light brown, much imbricated, and destitute of resinous matter. Cones in clusters of four or five, and pendulous, from four to five inches long, and two inches and a half broad at the base, straight, and tapering to a point, with a foot-stalk nearly one inch in length, and with from twelve to sixteen rows of scales in each, which are much elevated, slightly hooked, and nearly all of a size, but rather smaller towards the extremities, and measure about half an inch across. Each scale contains two very small seeds, with wings nearly an inch in length.

It was first discovered by Hartweg on the eastern declivity of the Mountain of Orizaba, in Mexico, at the same elevation (10,000 feet) as P. cembroides, growing in company with that species and a bushy Juniper; forming a small tree about 30 feet high, with a very graceful foliage and habit, but not abundant. It ripens its seeds in November, and is not quite hardy, as a very severe winter in England kills it.

No. 84. PINUS PARVIFLORA, *Siebold,* the Small (male) Flowered Japan Pine.

Syn. Pinus Cembra, *Thunberg,* not *Linnæus.*

Leaves in fives, very glaucous on both faces, stiff, pointed, slender, and mostly bent or twisted, convex, or flat on the back, with the inner face stoutly keeled, three-edged, denticulated on the back of the keel, and varying in length on the same shoot; from three-quarters of an inch to two inches in length, and remaining on the branches for three years. Sheaths composed of long membranaceous scales, which soon fall off and leave the base of the leaves naked, jutting out, and not decurrent. Male catkins very small, not more than three or four lines long, conical, or egg-shaped, and in clusters round the ends of the previous shoots. Branches spreading, horizontal, slender, and covered with smooth ashy-gray bark; lateral ones thickly covered with short, stiff, curved, glaucous leaves. Cones oval or elliptic, blunt at the ends, two inches and a quarter long, and composed of about twenty scales. Scales wedge-shaped, large, somewhat orbicular at the base, and rounded above, leathery, or almost woody, concave, and of a grayish brown colour, each scale covering two large wingless seeds at its base. Seeds oval, or elliptic, obtuse at both ends, and resembling those of the Siberian Stone Pine, but much larger, with a hard, bony, smooth shell, of a yellowish-brown colour. Seed-leaves from eight to ten in number.

A small tree, growing from 20 to 25 feet high, in the northern parts of Japan, on the Island of "Kuriles," on high mountains, and on the hill sides of Fakone. It is also found cultivated in the Japanese gardens, where they call it "Goyono Matsu" (Pinus pentaphylla), and distinguish different varieties, some on account of their small dimensions ("Fime-gajo-Matsu," the Dwarf Pine, with five leaves), and others on account of their longer leaves and less stunted appearance.

It is quite hardy.

No. 85. PINUS PEUCE, *Griesbeck*, the Rumelian Pine.
Syn. Pinus Cembra futicosa, *Griesbeck*.

Leaves in fives, rather erect, three-edged, bright green, with slight glaucous bands on the upper surface, very narrow, stiff, and acute-pointed, with the upper side channelled, the under one sharply keeled, the margins rough, and from three and a half to four inches long. Sheaths on the young leaves five or six lines long, and composed of oblong-linear sharp-pointed scales, which soon fall off and leave the base of the leaves naked. Branches spreading, and thickly furnished with short, slender, smooth laterals, thickly covered with leaves towards the ends, and naked on the lower parts. Cones in the adult state cylindrical, slightly tapering to the point, obtuse at both ends, nearly sessile, yellowish-brown, and from three to four inches long, and rather more than an inch in diameter, and furnished with seven or eight rows of scales. Scales an inch broad and three-fourths of an inch long, cartilaginous in the middle, thin on the edges, broadly rounded, furrowed, and wrinkled at the base and apex; loose, smooth, and shining on the back, with nearly one-third of their surface covered; umbo, or scar, smooth, and transversely lanceolate. Seeds ovate-oblong, obtuse at both ends, three lines long and two lines broad, and covered with a hard, brittle, bony shell of a yellowish-gray colour, and furnished with ample wings.

It is a native of the mountains of Macedonia and Rumelia, in European Turkey, at an elevation of from 5000 to 6000 feet, and in favourable situations forms an erect tree from 30 to 40 feet high but in high and exposed situations it becomes a low, spreading bush, not more than four feet high.

This kind bears a considerable resemblance to the Californian Pinus monticola.

No. 86. PINUS PROTUBERANS, *Roezl*, the Protuberant scaled Mexican Pine.

Syn. Pinus rudis, *Roezl*, not *Endlicher*.
„ „ angulata, *Roezl*.
„ „ Occidentalis, *Hort.*, not *Humboldt* or *Swartz*.
„ „ exserta, *Roezl*.
„ „ heteromorpha, *Roezl*.

Leaves in fives, very slender, curved, and 10 inches long. Sheaths nearly one inch long. Cones beautifully curved towards the point, in clusters of three or four together, and sharp-pointed, six inches long, and from two to two inches and a half in diameter. Scales irregular shaped, more than one inch broad, and half an inch long, rounded at the top, and smooth; protuberance very elevated, with different faces or centres set straight.

A tree upwards of 100 feet high, with its branches a little raised or elevated at the ends, and curved leaves; a very handsome kind, found at an elevated place on the Contreras, in Mexico, at from 9000 to 10,000 feet of elevation. Roezl found it growing from 70 to 75 feet high, with very slender branches, and curved leaves, upon low hills on Mount Tzompoli, in Mexico, at an elevation of 9000 feet.

A fine hardy kind, somewhat resembling Pinus Montezumæ in foliage and general appearance, but with very much smaller cones, having very angular, glossy scales, much elevated towards their points, and quite hard.

No. 87. Pinus Pseudo-Strobus, *Lindley*, the False Strobus Pine.

Syn. Pinus Tenangaensis, *Roezl.*
,, ,, Boothiana, *Roezl.*
,, ,, coarctata, *Roezl.*
,, ,, elegans, *Roezl.*
,, ,, grandis, *Roezl.*
,, ,, Haageana, *Roezl.*
,, ,, monstrosa, *Roezl.*
,, ,, Nesselrodiana, *Roezl.*
,, ,, Northumberlandiana, *Roezl.*
,, ,, Paxtoni, *Roezl.*
,, ,, Rumeliana, *Roezl.*
,, ,, San-Rafaeliana, *Roezl.*
,, ,, Soulangeana, *Roezl.*
,, ,, spinosa, *Roezl.*
,, ,, Thelemanni, *Roezl.*
,, ,, Tomacocaensis, *Roezl.*
,, ,, Van-Houttei, *Roezl.*

Leaves in fives, very slender, eight or ten inches long, of a bluish-gray or glaucous colour, rather pendulous when full grown, and slightly angular. Sheaths one inch long, composed of imbricated scales, and jagged at the ends. Branches diverging at right angles from the main stem, as in the Weymouth Pine (P. Strobus), with numerous slender branchlets. Cones from five to six inches long, and one inch and three-quarters broad, of a conical shape, slightly curved, and growing in whorls round the branches in a horizontal or slightly declining direction. Scales rhomboid, a little rounded towards the top, rising in the centre, depressed at the base, slightly keeled transversely across the middle, and terminated by a sharp point in the centre, and three-quarters of an inch broad, and rather more than half an inch long. Seeds middle-sized, with dark marbled wings one inch long.

A magnificent tree, from 90 to 100 feet high, with a very straight stem and horizontal branches, a little elevated towards the points, and furnished with great tufts of foliage at the ends of the shoots.

It is found in Mexico on the highest mountains, particularly in the State of Angangueo, at Real del Monte, and on the mountains between the two volcanoes of Popocatepetl and Ixtacihuatl; its chief range being from 8000 to 10,000 feet of elevation.

A most beautiful tree, on account of its fine long leaves, being in tufts or bundles at the ends of the shoots, and the branches being very regularly placed along the stem.

It is tender.

No. 88. PINUS REGELIANA, *Roezl*, Professor Regel's Pine.

Leaves in fives, slender, and from 10 to 11 inches long. Sheaths from three-quarters of an inch to one inch long, and silky. Cones five inches long, and one inch and three-quarters broad, and quite straight. Scales elevated in the middle, transversely keeled, three-quarters of an inch broad, and half an inch long; protuberance depressed, with a slight mucro in the centre.

This splendid tree is unequalled by any other in Mexico, with its long tufted branches, commencing within a yard of the ground. It grows on the opposite side of the mountain west from Ixtacihuatl, at an elevation of 8000 or 9000 feet.

No. 89. PINUS RUSSELLIANA, *Lindley*, the Duke of Bedford's Pine.

Syn. Pinus Dolleriana, *Roezl.*
„ „ horizontalis, *Roezl.*
„ „ Ortgisiana, *Roezl.*
„ „ Rinzi, *Roezl.*
„ „ Rohani, *Roezl,*
„ „ rubescens, *Roezl.*
„ „ Troubezkoiana, *Roezl.*

Leaves in fives, rather stout, seven or eight inches long, and of a beautiful deep green colour; outer ones curved, thickly set on the branches near the extremities, and slightly angular when full grown. Sheaths nearly one inch long, persistent, rather rough, and scaly. Branches very stout, but not numerous, and rather irregularly placed round the stem, but sometimes in whorls. Cones seven inches long, and one inch and three-quarters broad at the base, elongated, pointed, straight, and with a very short foot-stalk; horizontal, or slightly drooping, in whorls round the branches, and with a hard shining surface, destitute of resinous matter. Scales rhomboid at the apex, forming a small pyramid, with a straight blunt point, and of a dull grayish-brown colour, very hard, and compact. Seeds middle-sized, with rather short but broadish wings.

A beautiful tree, from 60 to 80 feet high, with few but very robust branches, loaded with fine long dark green leaves.

It is found on the highest point of the "Cumbra" and "Carmen," and on the road from San Pedro to San Pablo, near Real del Monte, in Mexico.

It is tolerably hardy.

No. 90. PINUS STROBUS, *Linnæus*, the Weymouth Pine.

Syn. Pinus Canadensis quinquefolia, *Duhamel.*

Leaves in fives, very slender, three or four inches long, three-sided, soft, and of a light glaucous or bluish-green colour, marked when young with silvery channels on one side. Sheaths very short, almost wanting, and soon falling off. Branches short, in whorls, thinly clothed with foliage, and having a very smooth shining bark. Cones long, narrow, slightly curved, cylindrical, tapering to rather a sharp point, bright-green when young, pendulous, and from five to six inches long, and one inch and a half broad, with a foot-stalk three-quarters of an inch long. Scales thin, smooth, oblong, with the upper part thickened, six-eighths of an inch broad, but diminishing in size, and more pointed towards the apex, lying rather loosely over each other, and full of resinous matter. Seeds small, ovate, of a dull gray colour, and with the wings one inch long.

A tall tree, with a smooth bark, growing from 100 to 150 feet high, and from four to six feet in diameter, forming a small conical head, and free from branches three-fourths of its height.

It is found on the sides of hills from Canada to Virginia, but attaining the largest size in the state of Vermont and New Hampshire, near the commencement of the River St. Lawrence.

The timber is white, light, free from knots, and easily worked, and is known as the Canadian White Pine, and Pumpkin Pine.

It derived the name of Weymouth Pine in consequence of Lord Weymouth, shortly after its introduction into England in 1705, having had a large quantity planted at Longleat, his lordship's seat in Wiltshire.

PINUS STROBUS BREVIFOLIA, *Booth*, the Short-leaved Weymouth Pine.

Syn. Pinus Strobus compressa, *Loddiges*.

This variety has much shorter and slenderer leaves than the common Weymouth Pine, and with the leaves growing closely compressed round the shoots.

A singular-looking variety.

PINUS STROBUS NANA, *Knight*, the Dwarf Weymouth Pine.

Syn. Pinus Strobus umbraculifera, *Hort.*
„ „ „ pumila, *Hort.*
„ „ „ tabuliformis, *Hort.*
„ „ Brogoittii, *Hort.*

This variety forms a small, dense, flat-topped bush, seldom more than two or three feet high, and the same through the head. The leaves are very slender, and from one and a half to two inches long.

Mr. Loudon makes mention of a plant which, after being planted thirty years, was only 18 inches high and two feet through the head.

PINUS STROBUS NIVEA, *Knight*, the White Weymouth, or Snow Pine.

Syn. Pinus Strobus alba, *Loudon*.
„ „ nivea, *Booth*.

This variety differs from the species in having the leaves erectly-spreading, more dense, and of a very dark-green colour when fully grown, but when young of a silvery white on the upper surface.

This kind bears considerable resemblance to Pinus monticola, but the leaves are less dense on the shoots, and much slenderer, and the cones narrower, and of a bright green colour when young, while those of Pinus monticola are of a dull purple.

A handsome and very hardy kind, of which there are good specimens in the Waltham Cross Nursery, and a fine tree at Brocket Hall, in Hertfordshire.

No. 91. PINUS TENUIFOLIA, *Bentham*, the Slender-leaved Pine.

Leaves in fives, very slender, from eight to ten inches long, bright, shining green, and sharp-pointed, slightly angular, and wavy. Sheaths persistent, half an inch long, and rather jagged at the ends. Branches numerous, very slender, drooping, and vertical. Cones oval, rather small, tapering to the point, from one inch and a half to two inches long, and one inch broad, several together on the branches, in a horizontal direction, or drooping position, when full-grown, and of a dark-brown colour. Scales rather small and numerous, half an inch across, thickened at the base, uneven-sided, oval, a little angular in the middle, depressed, with a projecting blunt point in the centre, and the margin rounded and rather thick. Seeds small and black, with rather large wings, one inch long.

A large tree, found to the east of the city of Guatemala, growing in ravines, and on the mountains of "Choacus," in the Province of Vera Paz, at an elevation of 5000 feet growing 100 feet high, and from three to five feet in diameter, forming dense forests, where scarcely any other plants can exist.

It is very tender, and unfit for the climate of England.

No. 92. PINUS WINCESTERIANA, *Gordon*, the Marquis of Winchester's Pine.

Syn. Pinus Winchesteriana, *Hort.*
„ „ Backhousiana, *Roezl.*
„ „ Chalmaensis, *Roezl.*
„ „ Ne-plus-ultra, *Roezl.*
„ „ retracta, *Roezl.*
„ „ Verschaffelti, *Roezl.*

Leaves in fives, from 12 to 14 inches in length (on the wild specimens), rather stout, three-edged, thickly set on the branches, glaucous-green, and much resembling those of Pinus filifolia, but broader and shorter than those of that species. Sheaths persistent, or not falling off, about one inch in length, smooth, and entire, or nearly so. Seed-leaves on the young plants mostly eight in number, and rather short. Branches few, spreading, irregular, and rather stout. Buds imbricated, non-resinous, and large. Cones pendulous, on very short foot-stalks, two or three together, but sometimes single, always much incurved, and tapering pretty regularly from the base to the point from eight to ten inches in length, and three inches and a half broad at the base, with from twenty-six to thirty rows of scales. Scales five-eighths of an inch broad, much elevated, particularly those upon the middle of the cone on the upper or outer side, where they become conical, and from three-eighths to a quarter of an inch high, while those on the under side and towards the extremities are much smaller, less elevated, and nearly all of a size; and from amongst which a large quantity of clear resin exudes, particularly on the outer side near the base. Seeds rather small, and angular, with rather broad wings one inch in length

This pine was first introduced by the Marquis of Winchester, but afterwards was obtained in abundance by Mr. Hartweg, who found it growing on the most elevated parts of the Cerro de San Juan, or Saddle Mountain, near Tepic, in Mexico, attaining a height of from 60 to 80 feet. It is very distinct from any other hitherto described, particularly in its very long, incurved, resinous cones.

It is not hardy in England.

Gen. PODOCARPUS. *Heritier.*

Flowers, diœcious, rarely monœcious.

Fruit, drupaceous, inverted, and adhering.

Seeds, hard, and bony shelled.

Leaves, either opposite, alternate, or scattered, linear or oblong, and one-nerved.

Seed-leaves, in twos.

Name, derived from "πους," a foot, and "καρπος," a fruit, fruit foot-stalked.

All natives of the temperate zones of Asia, Africa, and America.

Section I. EUPODOCARPUS, *Endlicher,* OR, THE TRUE PODOCARPS.

Fruit, solitary.

Receptacle, fleshy, connected with the bracts by the axis of the short spike.

Leaves, alternate or scattered, linear, and one-nerved.

No. 1. PODOCARPUS AFFINIS, *Seemann,* the Related Podocarpus.

Leaves closely arranged all round the branchlets, oblong, or oblong-lanceolate, erectly spreading, leathery, straight, tapering and somewhat twisted at the base, with the middle nerve prominent, and from one inch and a quarter to one and a half long, and one-third of an inch broad.

A kind of which little is known; found on the Viti and Fiji Islands, by Dr. Seemann.

No. 2. PODOCARPUS AMARA, *Blume*, the Bitter-fruited Podocarpus.

Syn. Podocarpus Dulcamara, *Seemann.*

Leaves alternate, or frequently opposite, somewhat in two rows, smooth on the margins, linear-lanceolate, closely set along the shoots, and tapering to a long point; from two to four inches long, and three-quarters of an inch broad, with a prominent rib on the under side, and channelled above; green on both sides, on short foot-stalks, slightly undulated and flexible. Branches in whorls, very spreading and slender; lateral ones somewhat in whorls, and swelled round the base. Buds small, somewhat globular, and covered with scales. Male flowers in axillary bundles, of from three to five, on short stout peduncles, from half to one inch in length, and naked at the base. Fruit globose, three-quarters of an inch long, and of a dark violet colour.

A tall tree, growing 200 feet high, with a spreading head, found on the highest parts of the volcanic mountains of Salak, Gede, &c., on the western part of the Island of Java, where the people call it "Kimerak."

It is very tender.

No. 3. PODOCARPUS ANGUSTIFOLIA, *Parlatore*, the Narrow-leaved Podocarpus.

Leaves crowded all round the branchlets, spreading, somewhat rigid, straight, very narrow, linear, acute, and spiny-pointed, tapering, and somewhat twisted at the base; marked with a furrow along the middle on the upper side, flat on the edges, and two inches long, and one line broad. Male catkins four or five in a fascicle at the end of an axillary peduncle one-third of an inch long. Fruit unknown.

A kind of which little is known, found by Mr. Bridges, in Bolivia.

No. 4. Podocarpus aristulata, *Parlatore,* the Awn-leaved Podocarpus.

Syn. Podocarpus Purdieana parvifolia, *Grisebeck.*

Leaves loosely arranged all round the branchlets, spreading, leathery in texture, straight, linear-lanceolate, bristle and spiny pointed, narrowing and somewhat twisted at the base, channelled along the middle on the upper side, revolute on the edges, and from one to two inches long, and a quarter of an inch broad. Male catkins solitary, cylindrical, and from one-third to half an inch long. Fruit ovate-oblong, and one-third of an inch long, and about half as wide.

A small tree, found in the eastern part of the island of Cuba.

No. 5. Podocarpus bracteata, *Blume,* the Bracteated Podocarpus.

Leaves scattered, but sometimes in close whorls, straight, or somewhat falcate, linear-lanceolate, and regularly tapering to the base, flat on the edges, furnished with scales at the base, slightly twisted, very acute pointed, leathery, a little glossy, and from three to five inches long, and from four to six lines broad on the adult trees, but from eight to nine inches long and from eight to ten lines broad on the young plants. Branches horizontal, cylindrical, and covered with reddish-gray bark. Branchlets opposite. Male catkins collected in bundles, rarely solitary, oval, and almost sessile; females axillary, solitary, and furnished at the base with a bractiform involucre; receptacle thick. Fruit globose, half an inch long, and of a violet-brown colour.

A large tree, growing 80 feet high, with a straight stem, covered with a smooth bark, and the top much branched, found in the forests of Amboyna, on the volcanic mountains of Burangrang, and in the western parts of Java, and called by the natives, "Ayewen," and "Essoyr."

It gets very much reduced in size and stature as it ascends the mountains, and has the following variety, according to Dr. Blume :—

PODOCARPUS BRACTEATA BREVIPES, *Blume.*

This variety has much shorter and narrower leaves, and shorter peduncles. Fruit elliptic, or somewhat globular, and very much smaller.

It is found on the western mountains of Java.

No. 6. PODOCARPUS CHILINA, *Richard*, the Chili Podocarpus.

Syn. Podocarpus saligna, *Don.*

Leaves linear-lanceolate, acute-pointed, straight, rarely falcate, alternate, spreading, sessile, entire, flat, smooth, of a bright green colour, and tapering to both ends, but most towards the point; from three to four inches long, and from two to four lines broad, with a single nerve along the middle of a paler colour. Branches very numerous, scattered, alternate, very rarely opposite, or in threes. Flowers diœcious, the male ones very small, and sessile on the ends of the branchlets; the females, on one-flowered peduncles, solitary, and rising from the base of the leaves on the branches. Fruit solitary, very rarely two in number, at the extremity of the receptacle, fleshy, ovate, obtuse, dark purple, smooth, shining, and with a slight point on the apex, and from two to four lines long.

A tree from 40 to 60 feet high, found abundantly on the mountains of Chili, where it is called "Maniu Pino."

This kind is frequently misnamed *Andina*, in the nurseries.

No. 7. PODOCARPUS CHINENSIS, *Wallich*, the Chinese Podocarpus.

Syn. Podocarpus macrophylla Maki, *Endlicher.*
„ „ Makoya, *Pin. Wob.*
„ „ Maki, *Siebold.*
„ „ Makayi, *Lawson.*
„ „ Makoyi, *Hort.*
„ „ Vriesiana, *Hort.*
„ „ Miquelia, *Hort.*
„ Taxus Chinensis, *Roxburgh.*
„ „ Makoyi, *Hort.*
„ Juniperus Chinensis, *Roxburgh.*

Leaves linear-lanceolate, reflexed on the margins, slightly pointed, closely placed, alternate, somewhat two-rowed, and reflected on the margins, green above and glaucous below on the younger ones, but the older ones are of a paler colour, with an elevated straight rib along the middle on the upper surface, terminating in an obtuse point, and from one and three-quarters to three inches long, and from two to three lines wide. Branches erect, spreading, alternate, or opposite, or sometimes somewhat vertical. Branchlets short and slender. Male flowers numerous, axillary towards the extremities of the branches, frequently connected in threes on the same peduncle, and rather more than an inch long; female flowers on lateral foot-stalks, with a fleshy receptacle nearly an inch long. Fruit cylindrical, oblong, obtuse-pointed, or slightly tapering to the base when young, but when old more globular, of a shining green, tolerably intense, and covered with a glaucous powder. The males and females are on separate plants, the male one being in general more delicate, its branches more erect, much shorter, and not so thickly furnished with leaves, which in general are more glaucous, not so long, a little broader, and more obtuse than those on the female plant.

A large bush, or small tree, with a straight stem, found abundantly in China and Japan.

The Chinese name for this species is "Sin-koja-Maki" (the common or Wild Maki), and the Japanese one, "Inu-Maki" (false, or spurious Maki). "Maki" is the name commonly applied, both in China and Japan, to all the large-leaved, Yew-like plants—such as Podocarpus, Sciadopitys, &c.

PODOCARPUS CHINENSIS AUREA, *Gordon,* the Golden Variegated Chinese Podocarpus.

This variety differs from the original form of the plant, in having its leaves sometimes one half golden yellow, or furnished with yellow marginal borders, or striped down the middle like a ribbon.

It was first sent to the Royal Nursery at Bagshot, by Mr. Fortune, from Japan, in 1861.

PODOCARPUS CHINENSIS ARGENTEA, *Gordon,* the Silver Variegated Chinese Podocarpus.

Another fine variegated variety, with silvery-white striped leaves, variously marked, sometimes with broad bands running the entire length of the leaf, like a ribbon, while other leaves are half white and half green, or all white and all green.

This handsome variety was first sent to the Royal Nursery at Bagshot, in 1861, by Mr. Fortune, from the neighbourhood of Yeddo, in Japan.

No. 8. PODOCARPUS CORIACEA, *Richard,* the Leathery-leaved Podocarpus.

Syn. Podocarpus Yacca, *Don.*
" " Antillarum, *R. Brown.*
" Taxus tenuifolia, *Wickstrœm.*

Leaves elliptic-lanceolate, tolerably thick, leathery, shining, sessile, or tapering to the base into a very short foot-stalk, getting narrower to the apex, and terminating in an almost obtuse point; from two to three inches long, and nearly half an inch broad in the widest part, with an elevated mid-rib running along the centre on both sides, but largest on the under surface. Branches spreading, horizontal, alternate, or sometimes opposite, or in whorls, frequently slender, and naked on the greater part of the larger ones, and tuberculated by the fallen leaves. Fruit globose, solitary, axillary, and very small, on short foot-stalks, with a fleshy receptacle, thickened, and sloping to the top. Seeds oval, or oblong, slightly curved, and terminating on the top in a short blunt point.

A small tree, from 40 to 50 feet high, found on the Antilles, the island of Montserrat, and on the Blue Mountains of Jamaica, where it is called "Yacca."

It is not hardy.

No. 9. Podocarpus corrugata, *Gordon*, the Corrugated-leaved Podocarpus.

Leaves very narrow, linear-lanceolate, acute-pointed, straight, and tapering much to the base; from three to four inches long, and two lines wide, with an uneven or corrugated surface above, and minutely streaked or irregularly marked with small bright green stripes, on a yellow ground colour, all over both faces, and furnished with an elevated rib along the middle of each leaf, both above and below.

A large evergreen bush or small tree, with delicately variegated foliage, much cultivated in the Japanese gardens about Yeddo, and sent from thence to Mr. Standish, of the Royal Nursery at Bagshot, by Mr. Fortune, in 1861.

No. 10. Podocarpus curvifolia, *Carrière*, the Curved-leaved Podocarpus.

Syn. Podocarpus Antarctica, *Van Houtte.*
„ „ Humboldtii, *Hort.*

Leaves ovate-oblong, alternate, thick, leathery, smooth, shining, stiff, revolute, and closely placed along the shoots; from two to five inches long, slightly concave on the back near the margins, flat on the upper surface, a little reflected on the edges, and with a projecting rib along the middle, on both faces, tapering at the base into a short stout foot-stalk, regularly and briefly terminating in a thick obtuse point, never acute, but frequently black.

A large tree, supposed to be found on the Andes of Patagonia and Chili, but of which little is known.

No. 11. PODOCARPUS DISCOLOR, *Blume*, the Discoloured Podocarpus.

Leaves thickly set on, or scattered along the shoots, linear-lanceolate, quite straight, leathery, stiff, and tapering to a sharp pungent point, from one inch and a half to two inches and a half long, and rather more than a quarter of an inch wide, attenuated at the base, and more or less reflected on the margins, slightly concave, and of a bright glossy green above, glaucous below, with an elevated rib on both faces, but most projecting on the under one. Branches in whorls, lateral ones ascending; buds oval, terminal one solitary, and covered with scales. Flowers and fruit unknown.

A large tree, covered with a reddish bark; found in the vast forests on the eastern part of Java, particularly on the most elevated parts of the volcanic mountains of Tjerimai and Teribon.

It is very tender.

No. 12. PODOCARPUS DROUYNIANA, *Mueller*, Drouyn's Podocarpus.

Leaves thickly scattered along the branchlets, erectly spreading, rather leathery, straight, linear, tapering to a somewhat fine spiny point and with a short and somewhat twisted foot-stalk, and from two to two and a half inches long and one line broad. Receptacle thick and oblong. Fruit ovate-globose, with an acute point at the apex, and three-quarters of an inch long and half an inch broad.

A small tree found along the banks of the Tom River in the south-western part of New Holland.

No. 13. PODOCARPUS ELATA, *R. Brown*, the Lofty Podocarpus.

Leaves alternate, spreading, linear, tapering to an obtuse point at both extremities, from three inches and a half to four inches long, and about four lines broad. Fruit axillary, solitary, and one-seeded on a slender receptacle; receptacle cylindrical, almost club-shaped, with the seed globular.

A tree, of which little is known, found on the eastern part of New Holland at Rockingham Bay.

No. 14. PODOCARPUS ELONGATA, *L'Heritier*, the Elongated Podocarpus.

Syn. Podocarpus pruinosa, *Zeyher.*
„ „ linearis, *Van Houtte.*
„ „ mucronata, *Hort.*
„ Taxus elongata, *Solander.*
„ „ Capensis, *Lamarck.*

Leaves linear, or oblong-lanceolate, straight, rarely falcate, attenuated, stiff, tolerably thick, and rather smooth at the edges; from one inch and a quarter to one and three-quarters long, and two lines broad, of a dark green or glaucous blue colour, with a rib along the upper surface, a little elevated, but hardly visible on the under side, sessile, or regularly tapering to a short foot-stalk at the base, very bluntly and regularly rounded on the top, and terminating in a short mucro; sometimes a little pointed or obtuse, but frequently wanting. Branches opposite, or in whorls, upper ones ascending, lower ones sometimes deflected, and spreading. Branchlets short, and slightly angular. Male flowers cylindrical, with numerous spirally imbricated anthers. Peduncles axillary, solitary, and from four to five lines long, terminated by a much shorter receptacle. Receptacle frequently fleshy, thick, oblique, slightly bifid on the top, and carrying an oval or globular seed about the size of a gooseberry, which is marbled on the outside.

A large tree, from 30 to 70 feet high, covered with a grayish-brown bark when old, and glaucous on the young shoots; found at the Cape of Good Hope, and in Abyssinia, on the mountains in the province of Goonjam, at an elevation of 6000 feet, where it is called "Sigha" by the people,

It is rather tender.

No. 15. PODOCARPUS ENDLICHERIAN, *Carrière,* Endlicher's Podocarpus.

Syn. Podocarpus nobilis, *Hort.*

Leaves alternate, closely arranged on the branches, somewhat two-rowed, straight, or very slightly falcate, undulated, and not thickened in the margins on the adult trees; those on the branchlets are almost oval, or elliptic, with several leaves in a whorl, more rounded at both extremities, and much shorter; from four to seven inches long, and from six to eight lines broad, pale green on both sides, but frequently much yellower on the under one, and with short stout foot-stalks. Branches, mostly in whorls of three (very rarely scattered), ascending, and little divided. Branchlets very short, stout, and covered with a yellowish bark. Fruit unknown.

A tall tree, covered with a yellowish-brown bark, smooth at first, but afterwards much wrinkled when old, and of which little is known, except that it is a very handsome and robust kind, remarkable for its large ample foliage. It is supposed to come from the northern parts of India, and most probably from Nepal.

No. 16. PODOCARPUS ENSIFOLIA, *R. Brown,* the Sword-leaved Podocarpus.

Leaves thinly scattered along the branchlets, spreading, leathery in texture, straight or somewhat falcate, elongate-lanceolate; blunt at the points, tapering and somewhat twisted at the base, with a single prominent nerve along the middle terminating in a slender acute point at the apex, and from three-fourths to an inch long and half an inch broad. Male catkins solitary, cylindrical, obtuse, closely placed, and forming loose taper bunches on the terminal branches, accompanied by scale-like leaves of various sizes. Fruit unknown.

A small tree found in Tasmania, and on the eastern part of New Holland, particularly on the Grafton Promontory.

No. 17. PODOCARPUS EURHYNCHA, *Miquel*, the Well-beaked Podocarpus.

Leaves alternate, elliptic-lanceolate, acute at the base, somewhat abruptly acuminate at the apex, and with the under side pallid and furnished with stomates, and the mid-rib very prominent on both sides. Fruit unknown.

A kind of which very little is known, found by Teysmann in the western part of Sumatra, at Battang and Barus.

No. 18. PODOCARPUS FALCATA, *R. Brown*, the Sickle-leaved Podocarpus.

Syn. Taxus falcata, *Thunberg.*

Leaves somewhat in two rows, linear subfalcate, acute-pointed, one-nerved, alternate, mucronate, and from two to four inches long, and a quarter of an inch broad. Flower spikes short, axillary, abortional, and single fruited. Seeds globular, tapering to the base, and without the fleshy receptacle.

A species of which little seems to be known, and said to be found at the Cape of Good Hope by Professor Thunberg.

No. 19. PODOCARPUS FALCIFORMIS, *Parlatore*, the Sickle-leaved Podocarpus.

Leaves somewhat two-rowed along the branchlets, leathery in texture, falcate, tapering to the points, and mucronate, attenuating and rather twisted at the base, and with a prominent nerve along the middle, and a quarter of an inch long, and two lines broad. Fruit unknown.

A shrub or small tree, with spreading branches, of which little is known, found on the Poe and Mettang Mountains near Sarawak in Borneo.

No. 20. PODOCARPUS GLOMERATA, *Don*, the Round-head-fruited Podocarpus.

Syn. Podocarpus rigida, *Klotzsch.*
„ Juniperus rigida, *Pavon.*

Leaves linear-lanceolate, stiff, straight or somewhat falcate, very sharp-pointed, alternate, flat, one-nerved, attenuated at the base, shining, and smooth on both surfaces; from one to one inch and three-quarters long, and from one to two lines broad. Branches numerous, cylindrical, leafy, and covered with a yellowish-brown smooth bark. Male catkins short, three-quarters of an inch long, cylindrical, united in a fascicle of five or six on an axillary foot-stalk. Fruit unknown.

A tree found in the neighbourhood of "Panao," in Peru.

No. 21. PODOCARPUS JAPONICA, *Siebold*, the Japan Podocarpus.

Syn. Podocarpus lanceolata, *Hort.*

Leaves alternate, flat, linear-lanceolate, elongated, obtuse-pointed, thick, leathery, and stiff; from four to eight inches long, and about half an inch wide, with an elevated rib, almost acute along the upper surface, but rounded on the under one, and tapering into a long slender point at the apex, and into a short stout foot-stalk at the base.

A small tree, found plentiful in Japan by Dr. Siebold.

PODOCARPUS JAPONICA ELEGANTISSIMA, *Hort*, the Very Elegant Japan Podocarpus.

A somewhat variegated variety of the Japan Podocarpus, with long, linear, narrow, lance-pointed leaves, which are, when young, of a pale yellow, but afterwards change to a dull green, and finally, when fully matured, become of the usual colour of the species.

No. 22. PODOCARPUS KORAIANA, *Siebold*, the Corean Podocarpus.

Syn. Cephalotaxus Koraiana, *Hort.*
„ Taxus japonica, *Loddiges.*
„ „ Fortunei, *Hort.*

Leaves regularly linear, somewhat falcate, alternate, or nearly spiral by their closeness along the shoots, leathery, stiff, revolute, and terminating in rather an obtuse end, furnished with a hard, acute point, from one and a quarter to two inches and a quarter long, and one line and a half broad, without, or on very short foot-stalks, of a deep glossy green, with a narrow, acute rib along the middle, on the upper surface, and glaucous on the under side, except on the centre nerve and raised margins, which are of a bright glossy green, and all terminating at the apex in a short spiny point, more or less acute. Buds covered with numerous persistent, oval, imbricated scales, keeled on the back, and pointed. Branches strictly erect, twiggy, stiff, and thinly furnished with laterals; branchlets very short, and with the branches channelled along their surface by the long decurrent base of the leaves, which, after they fall off, cause the branches and stems to become more or less tuberculated along the surface. Fruit unknown.

A small fastigiate bush, full of erect branches, thickly clothed with leaves, and not growing more than two or three feet high, found on the Chinese peninsula of Corea, and in Japan, where it is abundantly grown in the town gardens, and found wild on the mountains of Nagasaki.

It is quite hardy, and a very desirable little evergreen for small gardens.

No. 23. PODOCARPUS LÆTA, *Hoibrenk*, the Red-nerved Podocarpus.

Leaves spreading out, or deflected, linear-falcate, sessile, or tapering to a very short foot-stalk, from one inch and a half to one inch and three-quarters long, and a quarter of an inch wide, with a sharp, rigid mucro at the point, slightly thickened and convex on the upper surface, with a slight furrow, or little concave glaucous bands on the under part, on each side, of a reddish mid-rib. Branches verticillate, very rarely alternate, spread out, or declining, and not numerous or branching. Branchlets few in number, spreading, opposite, or in threes, very rarely scattered singly, but slightly channelled. Fruit unknown.

A tall tree, with a straight cylindrical stem, found on the east coast of New Holland.

No. 24. PODOCARPUS LAMBERTI, *Klotzsch*, Lambert's Podocarpus.

Leaves regularly linear, sharp-pointed, and tapering to the base, straight or falcate, without any foot-stalks, slender, and loosely scattered, smooth, or nearly so, on the upper surface, and flat, from one inch and a quarter to one inch and three-quarters long, and two lines broad. Male catkins short, in fascicules, on axillary foot-stalks, scaly at the base, foot-stalks of the fruit much longer than those of the receptacle, which is one-fruited. Fruit globular or oblong, shining, small, and about a quarter of an inch long.

A robust tree, found on the mountains of Brazil.

No. 25. PODOCARPUS LEPTOSTACHYA, *Blume*, the Slender-spiked Podocarpus.

Leaves somewhat in whorls, linear-lanceolate, alternate, straight, or sometimes slightly falcate, leathery, and closely placed on the shoots, from two to five inches long, and from three to six lines broad, tolerably thick, acute, with a pungent point, flat, shining, and tapering to the base, which is frequently a little twisted, of a dull green colour on the upper surface, but much paler below. Branches and branchlets much divided, somewhat in whorls, cylindrical, and with the stem and principal branches covered with a rough bark, full of cracks. Male catkins sometimes solitary, or in pairs, or in threes, furnished at the base with thin, shrivelled scales, two or three in number, and more or less deciduous. Fruit unknown.

A tree fifty or sixty feet high, found on the mountains in the Island of Borneo.

No. 26. PODOCARPUS MACROPHYLLA, *Don*, the Long-leaved Podocarpus.

Syn. Podocarpus verticillata, *Hort.*
„ „ longifolia, *Hort.*
„ Taxus macrophylla, *Thunberg.*
„ „ longifolia, *Hort.*
„ Maki-fœtens, *Kæmpfer.*

Leaves alternate or scattered, linear-lanceolate, or somewhat oblong, flat on the edges, distant, spread out, and of a dry, leathery texture, from two to four inches long, and about half an inch wide, with an elevated rib on both sides, but principally on the upper one, very rarely falcate, mostly straight, of a pale, shining green, and tapering to a short, round foot-stalk at the base, and obtuse point at the apex, sometimes withered, or furnished with a stiff, blackish point. Branches numerous, mostly in whorls; branchlets slightly angular, and rough from the fallen leaves. Male catkins furnished at the base with scales; female peduncles axillary, solitary, one-fruited, and furnished with two bracteas on the top. Fruit oval, smooth, and about the size of a pea.

A tree growing from forty to fifty feet high, with vertical branches, and an ample head, found abundantly in Japan, and much cultivated by the Japanese in their gardens.

The Chinese names for this species are "Fon-Maki" (true Maki), and "Sin-Maki" (common Maki); and those of the Japanese, "Inu-Maki" (wild Maki), and "Ksa-Maki" (fœtid Maki).

The timber is white, light, excellent, and free from the attacks of insects.

No. 27. PODOCARPUS MACROSTACHYA, *Parlatore,* the Long-spiked Podocarpus.

Leaves thickly scattered along the branchlets, oblong-lanceolate, obtuse at the points, spreading, very leathery in texture, revolute on the edges, shining, and channelled along the upper surface, on short and rather twisted foot-stalks, and from one to two inches long, and one-third of an inch broad. Male catkins solitary, sessile, cylindrical, and bracteated at the base. Fruit ovate-globose, with a short, blunt, oblique point, and four lines long, and nearly three lines wide.

A tree found on the Columbia mountains, and Sierra Nevada, in California.

No. 28. PODOCARPUS MANNII, *Hooker,* Mr. Mann's Podocarpus.

Leaves somewhat two-rowed, elongate-lanceolate, slightly falcate, narrow, acuminate, bristle-pointed, on somewhat terete foot-stalks, shining on the upper surface, broadly nerved along both sides, and from three to five inches long, and from two to four lines broad. Branches angular and slender. Fruit unknown.

A kind of which little is known, found on the Island of St. Thomas, in Western Africa.

No. 29. PODOCARPUS MEYERIANA, *Endlicher,* Meyer's Podocarpus.

Syn. Podocarpus elongata, *E. Meyer.*

Leaves thickly scattered along the branches, broadly-linear, or elliptic-lanceolate, straight, or very slightly falcate, stiff, thick, and leathery in texture, rather flat on the margins, somewhat acute and slightly pungent at the apex, tapering and somewhat twisted at the base, with the upper surface of a dark green or glaucous blue, and but slightly marked by the longitudinal furrow along the middle, and from one and a quarter to two inches long on the principal branches, but generally only from three-quarters to an inch long, and from one and three-quarters to three lines broad on the other parts of the tree. Branches in whorls and spreading; branchlets angular and glaucous. Male catkins cylindrical, solitary, or two or three together, in short, erectly-spreading, axillary, bracteate fascicles, and from three to four lines long; receptacle thick, fleshy, oblique, and slightly bilobed. Fruit globular, half an inch long, and about the same wide, and covered with a glaucous bloom.

A large tree, with a spreading head, and verticillate branches, and angular glaucous branchlets, found at the Cape of Good Hope.

It is tender.

No. 30. PODOCARPUS NEGLECTA, *Blume*, the Neglected Podocarpus.

Syn. Podocarpus Junghuhniana, *Miquel.*

Leaves somewhat in two rows, or scattered, linear-lanceolate, acute-pointed, and more or less reflected on the margins, from two to four inches long, and from half to three-quarters of an inch broad, with an elevated rib on both sides, but most on the under side, and tapering into a very short twisted foot-stalk. Branches opposite, or in whorls, cylindrical, and reddish-brown; branchlets opposite, two-rowed, and almost angular; buds covered with scales. Male catkins cylindrical, in bundles, on short, axillary peduncles, surrounded at the base with concave membranaceous scales, which soon fall off.

A tall tree, growing upwards of 100 feet high, found in forests on the western part of the Island of Java, at an elevation of 5000 feet, particularly at "Karang," in the province of Bantam, and about "Pangaranghu."

It is very tender.

No. 31. PODOCARPUS NERIIFOLIA, *R. Brown*, the Nerium-leaved Podocarpus.

Syn. Podocarpus macrophylla, *Wallich*, not *Don.*

Leaves alternate, but mostly very closely placed on the branchlets, erect or spreading, lanceolate, and acute-pointed, frequently reflected on the under side, and regularly attenuated to the base with a stout petiole, very thick, flat, and leathery from three to six inches long, and from a quarter to three-quarters of an inch broad, of a bright green on the upper surface, but much paler below, and traversed along the middle by a very elevated rib, almost acute on the upper side, but less elevated and more enlarged on the under one. Branches in whorls, slender, and provided with bracts at the base. Male catkins long, axillary, and solitary; females on axillary, one-flowered peduncles, longer than the receptacles; receptacle oblong, and obliquely lobed. Fruit eatable, with a sweetish taste.

A large tree, found in Nepal, Sikkim, Sincapore, and Penang, growing forty feet high, with horizontal branches in whorls.

This tree is called "Goonsi," in Nepal, and affords an article of food; the peduncles of the fruit, not the fruit itself, are edible.

It is not hardy.

No. 32. PODOCARPUS NOVÆ-CALEDONIÆ, *Vieillard*, the New Caledonia Podocarpus.

Syn. Podocarpus rivularis, *Pancher.*

Leaves linear-lanceolate, straight or slightly curved, perceptibly narrowing to the base, acute, but not spiny-pointed, revolute on the margins, and marked on both sides with a longitudinal nerve, and from one and three-quarters to three inches long, and one line and a half broad. Male catkins in twos, axillary, and nearly sessile. Fruit oval, smooth, shining, and one-third of an inch long, and one line and a half broad.

A somewhat pyramidal bush, with fastigiate branches, found along the banks of streams in New Caledonia.

No. 33. PODOCARPUS NUBIGÆNA, *Lindley*, the Cloud-born Podocarpus.

Syn. Saxe-Gothæa gracilis, *Hort.*
„ Podocarpus nubicola, *Makoy.*

Leaves linear-lanceolate, straight or somewhat falcate, thick, flat, rigid, and attenuated at the base, with a short, stout foot-stalk, and terminating in a short, acute, spiny point at the apex; from three-quarters of an inch to one inch and three-quarters long, and one-eighth of an inch broad, with a single nerve along the middle; green above, and marked on the under side, on each side of the rib by a broad band, more or less glaucous. Fruit oblong, growing singly in the axil of the leaves, on very short stalks, with the receptacle two-lobed, obovate, and unequal-sided. Seeds oblong, slightly bossed, and curved inwards at the point.

A large tree, found on the colder parts of Chili, the Andes of Patagonia, in the province of Valdivia, and the Island of Chiloe, where it is called "Pino." The fruit is pleasant to the taste, and eatable, and is used by the natives for food.

No. 34. PODOCARPUS OLEIFOLIA, *Don*, the Olive-leaved Podocarpus.

Syn. Podocarpus Chilena, *Lechler.*

Leaves lanceolate, acute, very entire, leathery, smooth on both sides, one-nerved, with a sunken channel on the upper surface, along the middle nerve, reflected on the edges, and tapering a little to the base; from one to one inch and a half long, and from two to three lines broad. Branches crowded, smooth, and thickly furnished with leaves. Male catkins without foot-stalks, cylindrical, solitary, and about one inch long; foot-stalks of the fruit filiform, two-lobed, smooth, about three quarters of an inch long, and two-flowered, one always abortive. Fruit oval, solitary, very smooth, reflected, and one-third of an inch long.

A tufted tree, with close branches, and covered with a yellowish-brown bark, found on the mountains of Chili and Peru.

It is not hardy.

No. 35. PODOCARPUS PARVIFOLIA, *Parlatore* the Small-leaved Podocarpus.

Leaves small, and thickly scattered along the branches, linear-oblong, acute, mucronate, and somewhat pungent, tapering to a short petiole, and somewhat twisted at the base; upper surface smooth and marked with a longitudinal furrow, margin hardly revolute. Fruit ovate, pointed.

A kind of which little is known, found in New Holland by the late Allan Cunningham.

No. 36. PODOCARPUS POLYSTACHYA, *R. Brown*, the Many-spiked Podocarpus.

Leaves lanceolate, sharp-pointed, leathery in texture, curved at the margins, and from one and three-quarters to three inches long, and from two and a half to four lines broad. Male flowers axillary, somewhat in threes, and provided at the base with a scale-formed involucre. Fruit on axillary foot-stalks, and solitary.

A large tree, with a straight stem, and very branching ample head; found at Sincapore, in Borneo at Sarawack, and on the Prince of Wales Island, where it is called the Wax-Dammara. This species is very like Podocarpus bracteata, but differs in having the leaves and catkins much shorter but stouter, and in the receptacle being much thicker, and the fruit more globular.

No. 37. PODOCARPUS PURDIEANA, *Hooker*, Purdie's Jamaica Podocarpus.

Syn. Podocarpus Jamaicensis, *Hort.*

Leaves elliptic, or oblong-lanceolate, thick, leathery, very smooth, and shining on the upper surface, flat, straight, very rarely falcate, and slightly recurved on the margins; from three to five inches long, and from three quarters of an inch to one inch broad, of a bright green, regularly tapering into a short stout foot-stalk at the base, and from the middle of the leaf on each side to the point, which is terminated by a stout, short, mostly black, obtuse point, but sometimes variable, those of the young plants being acute and spiny. Branches spreading, horizontal, and marked by the scars caused by the falling off of the old leaves. Fruit with the foot-stalks much shorter than the receptacle, which is bifid, and one-fruited. Seeds somewhat globose, terminating on the upper part in an oblique little flexible point.

A large tree, growing upwards of 100 feet high, found on the eastern side of the Island of Jamaica, at an elevation of from 2500 to 3500feet.

It is very tender.

No. 38. PODOCARPUS RUMPHII, *Blume*, Rumphius's Podocarpus.

Syn. Lignum Emanum, *Rumphius.*

Leaves sometimes in whorls of from three to four on the young shoot, but scattered, or somewhat in two rows on the more adult trees, linear-lanceolate, spreading, acute-pointed, very rarely blunt at the ends, straight, or somewhat falcate, leathery, and on very short foot-stalks; from five to nine inches long, and from three-quarters of an inch to one inch broad, with an acute rib on the under side, but hardly prominent, and somewhat keeled above, and of a bright shining green on the upper surface. Branches long and smooth; buds small, ovate, and covered with scales; foot-stalks axillary, solitary, and about one inch long, furnished on the top with from one to three flowers; receptacle turban-shaped, obliquely truncated on the ends, fleshy, of a dark violet colour, and containing one, but sometimes two seeds. Fruit elliptic, or somewhat globular, covered when ripe with a glaucous bloom.

A tall tree, growing from eighty to a hundred feet high, with a straight stem, covered with a reddish-brown bark, slightly wrinkled, and found in the most elevated forests in the Moluccas, and New Guinea.

No. 39. PODOCARPUS SALICIFOLIA, *Klotzsch*, the Willow-leaved Podocarpus.

Syn. Purdieana, *Hort.*, not *Hooker.*

Leaves somewhat falcate, very long, and tapering to the point, leathery, stiff, of a pale green, and shining on the upper surface; from three to five inches long, and very rarely more than half an inch broad. Male catkins axillary, solitary, cylindrical, obtuse, a little incurved, and three-quarters of an inch long, with angular foot-stalks; foot-stalks of the fruit, from three-quarters of an inch to one inch long, and much thicker than that of the receptacle, which is two-lobed, but only one-fruited. Fruit oblong, or globular, smooth, and furnished with a shortish point on the apex.

A small tree, found on the mountains of Colombia, and in the North-western part of South America.

It is very tender.

No. 40. PODOCARPUS SELLOWII, *Klotzsch*, Sellow's Podocarpus.

Leaves long, lanceolate, acute-pointed, and tapering to the base; from two to three inches long, and from three to six lines broad in the widest part. Male flowers axillary, elongated, and solitary; foot-stalks of the fruit slender, with the upper part two-flowered, but only one-fruited, the other being always abortive. Fruit smooth.

A tree, from twenty to thirty feet high, found on the mountains of Brazil, by Sellow, but not hardy.

No. 41. PODOCARPUS SPINULOSA, *R. Brown*, the Spiny-leaved Podocarpus.

Syn. Podocarpus excelsa, *Loddiges.*
„ „ pungens, *Don.*
„ Taxus spinulosa, *Smith.*

Leaves alternate, or opposite, or in whorls, linear-falcate, leathery, spreading in all directions, pungent, smooth, and thick, from one to one inch and three-quarters long, and one line broad, tapering to a very sharp point, thickened on the edges, and with an elevated rib along the middle. Branches slender and spreading. Male flowers in clusters, and axillary. Fruit on axillary foot-stalks, much longer than those of the receptacles, which are somewhat club-shaped, and one-fruited. Seed globular, solitary, and about as large as a pea.

A tree, found growing about Port Jackson, and in the eastern part of New Holland.

It is not hardy.

No. 42. PODOCARPUS SPRUCEI, *Parlatore*, Spruce's Podocarpus.

Leaves thickly crowded along the branches, erectly-spreading, linear-lanceolate, acute, and somewhat spiny-pointed, leathery in texture, tapering to a short petiole, somewhat twisted at the base, very slightly revolute on the margins, and marked along the upper surface by the sunken mid-rib, and from one to two inches long, and two lines wide. Fruit small, solitary, and globular.

A tree, found on the Andes of Peru, of which little at present is known.

No. 43. PODOCARPUS TEYSMANNI, *Miquel*, Teysmann's Podocarpus.

Leaves scattered or subverticillate, broadly-lanceolate, leathery in texture, straight or somewhat falcate, tapering to the foot-stalk, and somewhat twisted at the base, with the midrib on the upper side very prominent, and on the under one but slightly so, and from four to five inches long, and three-fourths of an inch broad. Fruit unknown.

A kind found along the sea-shore, in the western part of Sumatra, and on Mount Poe, and at the base of the mountains of Gunang and Mattang, near Sarawak in the Island of Borneo.

No. 44. PODOCARPUS THEVETIÆFOLIA, *Blume*, the Thevetia-leaved Podocarpus.

Leaves linear-lanceolate, or sometimes spoon-shaped on the shorter branchlets, very straight, without foot-stalks, acute or obtuse pointed, tapering to the base, and frequently a little twisted, from one and a half to three inches long, and from a quarter to half an inch broad, leathery, flat, concolor, and shining, with a prominent rib on the under side, a little elevated also on the upper one. Branches straggling, mostly forked, the younger ones angled, and channelled along the surface; peduncles axillary, filiform, and solitary, from three to four lines long, with a turban-shaped receptacle, obliquely truncated, furrowed on the back, fleshy, and of a dark-green colour, double the size of the seed, which is about half an inch long, and elliptic.

A very branching tree, growing from forty to fifty feet high, found amongst the rocks, along the coast of New Guinea, and probably on other islands in the South Pacific.

It is very tender.

No. 45. PODOCARPUS THUNBERGII, *Hooker*, Thunberg's Podocarpus.

Syn. Taxus latifolia, *Thunberg*.
„ Podocarpus latifolia, *R. Brown*.

Leaves oblong-lanceolate, straight, or very slightly falcate, obtuse at the extremities, or with a dry, blunt point at the apex, and regularly attenuating into a very short foot-stalk at the base, one-nerved, the same colour on both sides, and of a leathery texture; from one and a half to two inches and a half long, and half an inch broad, sometimes acute or blunt-pointed; peduncles axillary, solitary, one-flowered, from two to three lines long, and about the same length as the receptacle; receptacle thick, angular, bidented on the top, and containing a single seed. Seeds elliptic, or frequently nearly round, with a little curved point on the top.

A large evergreen tree, found at the Cape of Good Hope, where the colonists call it "Geelhout" (yellow wood).

It is not hardy.

No. 46. PODOCARPUS TOTARA, *Don*, the Totarra Pine.

Syn. Podocarpus pungens, *Van Houtte.*
„ Dacrydium spicatum, *Hort.*
„ Podocarpus spinulosa, *Makoy.*
„ „ Bidwilli, *Hoibrenk.*

Leaves spreading in all directions, alternate, distant, linear-lanceolate, pungent, rigid, and very sharp-pointed, slightly tapering to the base, of a yellowish-green colour on the upper surface, very pale, and glaucous below, with a single nerve, very little projecting along the middle, and slightly bent round the margins, from three-quarters to one inch and a half long, and about one line broad. Branches slender, rounded, and long; branchlets forked, but sometimes in threes, twiggy, rounded, and of a pale yellowish-green colour; male and female on separate plants; male flowers solitary, axillary, without foot-stalks, cylindrical, and longer than the leaves; female ones on solitary foot-stalks, with one or two flowers on each, axillary, and hardly one line long, thickening into a very ample, fleshy receptacle. Seeds, when young, oblong; when mature, oval, and solitary, very rarely in twos on the same foot-stalk.

A tall tree, growing from eighty to ninety feet high, and twenty feet in circumference, found on the northern island of New Zealand, where it is called "Totarra" by the natives.

This is one of the best timber trees in New Zealand, growing sometimes 120 feet high. Its timber is in great repute among the colonists for its durability and freedom from the ravages of insects.

Section II. STACHYCARPUS, *Endlicher*, OR THE SPIKE-FRUITED PODOCARPUS.

Flowers, in spikes, provided with bracts, and frequently all abortive except the upper ones.

Fleshy receptacle, wanting.

Leaves, alternate, or more frequently in two rows, linear, and one-nerved.

All trees or bushes, natives of the Cape of Good Hope, New Zealand, and the temperate parts of South America.

No. 47. PODOCARPUS ALPINA, *Hooker*, the Alpine Podocarpus.

Leaves thickly scattered, or somewhat two-rowed, along the branches, linear, obtuse, with a small spine at the apex, straight, or slightly falcate, and flat, with a slight furrow along the middle, and deep green above, pale green with a prominent rib on the under side, decurrent, and somewhat twisted at the base, and from three to four lines long, and nearly one line broad. Branches long, slender, and very spreading. Branchlets very slender, and of various lengths, mostly in distinct whorls, and bright green. Male catkins solitary, or in fascicles, cylindrical, sessile, and one-third of an inch long. Fruit small, with a fleshy peduncle, unequal sided, oblique, and bifid at the top.

A spreading bush, from ten to twelve feet high, found on the Alpine mountains, in the south-eastern part of New Holland, and on Mount Wellington, and the elevated plains of Marlborough in Tasmania, at an elevation of from 3000 to 4000 feet.

No. 48. PODOCARPUS ANDINA, *Pœppig*, the Andes Podocarpus, or Plum Fir.

Syn. Podocarpus spicata, *Pœppig*, not *Brown*.
„ Taxus spicata, *Dombey*.
„ Prumnopitys elegans, *Philippi*.

Leaves regularly linear, tapering to both ends, and either thickly scattered or two-rowed along the branchlets, those on the lower parts being scattered, while those on the upper ones are mostly in two rows, with very short foot-stalks, and from three-quarters to one inch and a half long, and about one line broad, of a dark glossy green colour above, more or less rusty on the edges, without any rib, and glaucous below, leathery, stiff, very smooth, and dense. Branches numerous, and erectly spreading; branchlets short, stout, spreading, and scattered, but frequently alternate and angular near the top. Flower-spike axillary and alternate; peduncle two or three-flowered, but one-fruited from abortion; bracts small and sessile; receptacle oval, on the end of a long neck, obscurely three-lobed, and oblique, smooth, plump, purple, and persistent after the fruit is ripe. Fruit globular, smooth, fleshy, succulent, without any foot-stalk, dark purple, and about the size of a common cherry. Seeds with a hard, bony shell.

An evergreen pyramidal tree, from forty to fifty feet high, with a cylindrical stem, covered with a smooth reddish-brown bark, found in the shaded valleys of Quillai Leuvu in the neighbourhood of Antuco, and on the colder Alpine regions of South Chili. Professor Philippi describes it as a rather large tree inhabiting the inner Andes of the province of Colchagua, and the banks of the River Traijuen in the Province of Valdivia, in the extreme south of Chili. The native name of the tree is "Lleuque," and the drupes or plums are eaten when ripe as well as the kernels they contain.

Timber hard, yellow, and beautifully veined, and in much request among the cabinet-makers in Chili.

It is quite hardy.

No. 49. PODOCARPUS FERRUGINEA, *Don*, the Rusty-coloured Podocarpus.

Leaves in two rows, narrow, linear, somewhat falcate, very dense, and acute-pointed, from three-quarters to one inch and a quarter long, and one line broad; those on the branches and larger branchlets are needle or awl-shaped, orscale-formed, and disposed all round, somewhat depressed, and, like the others, of a brownish tint. Rib very prominent on the upper part, but very slightly so on the under one, and of a rusty-brown colour, tapering to a fine acute point, sometimes, but very rarely, to an obtuse one. Branches spreading, frequently alternate, lateral ones and branchlets two-rowed, slender, spreading, horizontal, or bent downwards, and covered with a reddish-brown bark. Male catkins cylindrical, or oblong, axillary, and solitary; female flower-spikes one-flowered, axillary, or erect on the ends of the branchlets, with numerous bracteas. Fruit oval or globular, about the size of a hazel-nut, soft, and of a fine red colour, and when ripe covered with a glaucous powder, and with the odour of turpentine.

A tree from forty to sixty feet high, and three feet in diameter, found on the northern island of New Zealand, where it is called Miro, or Mairo, by the New Zealanders. Timber durable, and of a fine red tint.

It is not hardy.

No. 50. PODOCARPUS LAWRENCII, *Hooker*, Lawrence's Podocarpus.

Syn. Podocarpus Alpina Lawrencii, *Parlatore.*

Leaves somewhat in two rows, spreading, linear, narrow, and tapering to both ends, of a pale-green colour above, glaucous below, and furnished with a very sharp, rigid point. Branches slender. Flowers and fruit unknown.

A small tree, found by Gunn, in Tasmania, of which little further is known.

No. 51. PODOCARPUS NIVALIS, *Hooker*, the Snowy Podocarpus.

Leaves oblong, or elliptic, obtuse, recurved, and spreading, tapering to the base and apex, very closely placed, thick on the edges, sessile, or on very short foot-stalks, and with a single nerve along the middle of the leaf, scarcely visible or almost wanting on the upper surface, but rather projecting on the under one; from three to four lines long, and from one to one line and a half broad in the widest part. Male flowers small, cylindrical, obtuse, and united in threes on the top of the axillary peduncle. Fruit unknown.

A very small bush, found near the limits of perpetual snow, on the mountain of Tongariro, in the northern part of New Zealand.

It is not yet introduced.

No. 52. PODOCARPUS SPICATA, *R. Brown*, the Spike-flowered Podocarpus.

Syn. Dacrydium Mai, *Cunningham.*
„ „ taxifolium, *Banks.*
„ „ Mayi, *Van Houtte.*

Leaves mostly in two rows, but sometimes those on the larger branches are alternate and scattered; from a quarter to one inch and a quarter long, and one line broad, needle-shaped, imbricated, placed all round, and glaucous below, while those on the small lateral ones and branchlets are regularly linear, acute-pointed, mostly falcate, and of a dull green, or reddish-brown on the upper surface, and with two glaucous bands below, recurved at the edges, oblique at the base, rounded at the ends, sometimes spoon-shaped, and furnished with a very fine and short mucro, and placed on very short slender foot-stalks. Branches and branchlets numerous, flexuose, ascending, or spreading horizontal, or sometimes deflected, and covered with a reddish bark. Male catkins from ten to twenty in number, sessile, and disposed in erect axillary spikes, those of the female ones in loose, many-fruited spikes. Fruit globular, nearly sessile, and from four to seven on each spike.

An enormous tree, growing from 150 to 200 feet high, with a straight stem, found growing in swampy places on the Northern Island of New Zealand, where the natives call it "Mai."

It is quite tender.

No. 53. PODOCARPUS TAXIFOLIA, *Humboldt*, the Yew-leaved Podocarpus.

Syn. Taxus montana, *Willdenow* not *Nuttall.*
„ Podocarpus montana, *Loddiges.*
„ „ Humboldti, *Hort.*
„ Torreya Humboldti, *Knight.*
„ Dacrydium distichum, *Don.*

Leaves somewhat in two rows, or scattered, broadly linear, frequently more or less sickle shaped, bluntly rounded at the ends, rarely pointed, but mostly furnished with a very short mucro, entire, leathery, smooth, flat, or a little convex, of a bright glossy green above, and much paler below; from half an inch to an inch long, and one line and a half broad, with a slight rib along the upper surface, but hardly visible on the under one except by its colour. Branches ascending or spreading, but sometimes, on old trees, drooping. Branchlets in two rows, and alternate. Flower spikes branching, axillary, and terminating in two or three flowers, but abortive, and only one-fruited. Seeds ovate, or globular.

A tree about sixty feet high, with a spreading head, found on the mountains of Saragura, in Peru, and between Ona and Loxa, at an elevation of from 6000 to 8000 feet.

There is the following variety:—

PODOCARPUS TAXIFOLIA DENSIFOLIA, *Kunth.*

Syn. Taxus montana, *Var. Willdenow.*

Leaves much denser, and not more than half the length of those of the species, but in other respects the same.

It is found on the mountains of Quindiu, between Moral and Passo-del-Machin, in Peru, at an elevation of from 6000 to 8000 feet.

Section III. DACRYCARPUS. *Endlicher,* OR THE DACRYDIUM-FRUITED PODOCARPS.

Flowers solitary and terminal.

Receptacle fleshy with the axis of the short spike, without bracts.

Leaves many-formed, either three-sided, needle-shaped, and in five rows, or in two rows, spreading, linear, and flat.

Large trees, natives of Java and New Zealand.

No. 54. PODOCARPUS CUPRESSINA, *R. Brown*, the Cypress-like Podocarpus.

Syn. Podocarpus imbricata, *Blume.*
„ „ Horsfieldii, *Wallich.*
„ Taxodium Horsfieldii, *Knight.*
„ Glyptostrobus Horsfieldii, *Knight.*

Leaves opposite, linear-falcate, and spreading, in two rows on the lesser branchlets, but arranged in five rows, loosely imbricated, needle-shaped, three-sided or awl-shaped, acute, and spiny-pointed on the principal and lateral branches; from three to eight lines long, and from one half to three-quarters of a line broad, of a bright glossy green colour on both faces, very slender, soft, slightly concave, tapering to each end, but least to the base, and very acute at the point on the adult ones. Branches slender, reflected, or pendent, but sometimes with the upper ones ascending, regularly divided, very numerous, and covered with scale-formed leaves of various lengths, closely adhering at the base; lateral ones much divided, very slender, alternate, in two rows, and more or less distant. Branchlets very short, slender, two-rowed, and thickly covered with spreading leaves, until they almost touch each other. Fruit solitary, terminal, on short pendent branchlets, surrounded by leaves, a little longer, and more spreading than the others. Receptacle fleshy, almost the length of the fruit, and a little thickened.

A fine tall tree, growing 180 feet high, well furnished with spreading branches, clothed with vivid green foliage, found in Java where it is called "Chomoro'), and in the Pulo-Penang, and the Philippine Islands, where the natives call it "Kimerak" and "Kiputrie." It constitutes one of the best timber trees on the island of Java.

No. 55. PODOCARPUS CUMINGII, *Parlatore*, Cuming's Podocarpus.

Leaves on the young branchlets in two rows, linear-lanceolate, falcate, somewhat four-sided, mucronate, spreading, and from a quarter to one-third of an inch long, and half a line broad, while those on the adult parts are linear-subulate, decurrent at the base, and shorter and flatter. Fruit solitary, ovate-globose, pale yellow, shining, mucronate at the apex, and two lines long, and about the same broad. Receptacle broader and longer, and sessile.

A tree very full of branches and crowded branchlets, found in the Philippine Islands by Cuming, and of which but little is known.

No. 56. PODOCARPUS DACRYDIOIDES, *Richard*, the Dacrydium-like Podocarpus.

Syn. Dacrydium thuioides, *Solander*.
„ „ excelsum, *Don.*
„ „ ferrugineum, *Van Houtte.*
„ Podocarpus thuioides, *R. Brown.*

Leaves generally awl-shaped, decurrent, spiny-pointed, often loosely imbricated, and from one to two lines long; those on the larger branches and lateral ones scale-formed, scattered all round, adhering at the base, more or less spreading, and very acute-pointed, while those on the branchlets are flat, horizontal, linear, curved backwards, sickle-shaped, and closely placed in two rows; from two to three lines long, and about one-third of a line broad, and all more or less of a rusty-brown or copper-colour, somewhat glaucous when young. Branches spreading, or bent downwards, rarely ascending, very slender, long, and scattered at irregular distances along the stem; lateral ones rounded, spreading, or drooping, frequently abortive, but producing numerous short ramules, full of leaves, which sometimes are so plentiful as to entirely hide the branches, while at other times they are very distant. Female flowers solitary, terminal, and without, or on very short, foot-stalks. Receptacle fleshy, connected at the base, and open only on the top, which is obtuse. Fruit inversely egg-shaped, almost drupaceous, about the size of a pea, and furnished on the apex with a little flexible point.

A large tree, growing 200 feet high in swampy places, with a grayish-white bark; found on the Northern Island of New Zealand.

The aborigines of New Zealand call this tree "Kaki-Katea" (Water-pine), on account of the tree only growing in marshy places, or probably from its large and soft white timber being principally used by them in making canoes of large dimensions.

The colonists call it "White Wood," and eat its little succulent fruit, which is sweetish, and produced in great abundance.

It is quite tender.

No. 57. PODOCARPUS USTA, *Brongniart*, the whitened Podocarpus.

Syn. Dacrydium ustum, *Vieillard.*

Leaves in alternate pairs, scale-formed, acute-pointed, decurrent at the base, and somewhat remotely placed, and always imbricated on the young fastigiate branchlets. Branches and branchlets short, divaricate, and somewhat four-sided by the imbricated, small, scale-formed leaves. Male catkins axillary on the erect branchlets, solitary, and oblong-cylindrical. Fruit globose, sessile, and about one line long.

A diffuse shrub, with numerous divaricate branchlets, a little tortuose, found in the mountain woods of Poila and Diane in New Caledonia.

UNCERTAIN AND LITTLE KNOWN KINDS.

No. 58. PODOCARPUS TENUIFOLIA, *Parlatore*, the Slender-leaved Podocarpus.

Syn. Dacrydium elatum tenuifolium, *Carrière.*
„ „ tenuifolium, *Parlatore.*

Leaves on the young branchlets alternate, very slender, linear-falcate, compressed, closely placed in two rows, and nearly half an inch long and half a line broad, while those on the adult parts are linear-subulate, and convexly-keeled on the back; all of them are decurrent at the base, and mucronate at the apex.

A tree with erect, curved branches, and slender branchlets; found on the wooded mountains in New Caledonia.

No. 59. PODOCARPUS VIEILLARDII, *Parlatore,* Vieillard's Podocarpus.

Syn. Dacrydium elatum compacta, *Carrière.*
„ „ Vieillardii, *Parlatore.*

Leaves on the young shoots scattered, or somewhat two-rowed, spreading, glaucescent, and from a quarter to half an inch long, and very narrow; while those on the adult parts are scattered, adpressed, and convexly-keeled on the back; all of them are decurrent at the base, and mucronately-subulate at the apex. Male catkins solitary, erect, linear, and terminal, and from a quarter to half an inch long. Fruit unknown.

A tree found growing among the rocks, along the banks of running streams at Poila, in New Caledonia.

Gen. PSEUDO-LARIX. *Gordon.* The False or Chinese Larch.

Flowers monœcious, or male and female separate, but on the same plant.

Cones oblong, pendent, brittle, and, like the head of the common Artichoke, covered with divergent scales.

Scales very deciduous, extended at the points, heart-shaped at the base, and enclosing at the bottom two soft-coated seeds.

Seeds irregularly shaped, with a soft, thin, whitish, skin-like covering, more or less enclosed by the wing, but free, and full of turpentine.

Wings oval-lanceolate on the outer side, but quite straight on the inner one, and entirely covering the inner face of the scale.

Leaves deciduous, soft, linear, flat, and collected in bundles on the adult plants, but scattered singly along the young shoots, and very long on the young plants.

Seed-leaves from five to seven in number.

Name derived from "Pseudo," false, and "larix," the Larch—the false or Chinese Larch.

A noble hardy tree, found by Mr. Fortune in the Central and North-east provinces of China, and very distinct from the European Larches, in the cones having deciduous scales, with divergent points.

PSEUDO-LARIX KÆMPFERI, *Gordon,* the Golden or Chinese Larch.

Syn. Larix Kæmpferi, *Fortune.*
„ Abies Kæmpferi, *Lindley.*
„ Pinus Kæmpferi, *Lambert.*

Leaves in bundles on the adult branches, and singly on the leading shoots and young plants, very slim, linear-lanceolate, tapering to the point, and quite deciduous; from one inch and a half to two inches and a half long, and rather more than one line broad, of a beautiful light green when young, but before falling off in the autumn, of a fine golden yellow. Branches exactly similar to those of the common Larch. Cones pendulous, three inches long, and two inches and a half wide near the base, conical, with deciduous scales, diverging out at the points like those on the head of the common Artichoke, and very brittle when young, excessively deciduous when ripe, falling asunder from the least pressure, but adhering very loosely in bunches by long woody threads, one of which passes out of the base of each scale to the axis of the cone, round which the scales originally grew. Scales heart-shaped, flat, woody, entire on the margins, tapering gradually to an obtuse point, and rather more than an inch long, with a very small sharp-pointed bract at the base of each scale on the outer side, keeled on the back. Seeds in twos at the base of each scale, rather irregularly shaped, with a soft membranaceous covering, of a whitish colour, full of turpentine, and enveloped on the outer side by the wings. Wings more than an inch long, broadest at the base, regularly tapering to a rounded point, and of a glossy light brown colour.

A splendid tree, from 120 to 130 feet high, with a pyramidal head, found by Fortune in the Northern, Eastern, and Central provinces of China.

The Chinese call this tree "Kara-mats" (Pine full of buds), and "Kin-le-sung" (common golden Pine); and the Japanese, "Fusi," or "Fusji" (buds crowned with leaves), and "Seosa-mats" (deciduous Fir).

It is quite hardy.

Gen. RETINOSPORA.* *Siebold.*

Flowers monœcious, or male and female on the same plant, but separate, and terminal, the males cylindrical, females solitary, very small, and on the same branchlets as the males.

Cones very small, globular, ligneous, and solitary.

Scales ovate, in alternate cross pairs, ten or twelve in number, wedge-shaped at the base, peltated on the top, and woody.

Seeds in channels, coated with resin, and two at the base of each scale, with lateral membranaceous wing, marked with resinous bands.

Leaves persistent, in threes, or opposite pairs, linear, or scale-formed, and mostly spreading.

Seed-leaves in twos.

Name derived from "rhetine," resin, and "spore," seed,—the seeds being coated with resin.

All evergreen trees or shrubs, natives of Japan.

No. 1. RETINOSPORA ELWANGERIANA, *Barry*, the American Tom Thumb, Arbor Vitæ.

Syn. Thuja Occidentalis ericoides, *Hort.*
" " Elwangeriana, *Hort.*
" " hybrida, *Hort.*

The leaves on this plant are of two kinds; the primordial ones being linear, acute, rather distant, spreading, somewhat decussate, and from two to three lines long, while those on the more mature parts are small, scale-formed, very acute, and closely imbricated in four rows, with mostly a transparent gland on the back, and of a bright green colour. Branches numerous and erectly spreading. Branchlets very numerous, slender, and either open and heath-like, or flat and closely imbricated like an Arbor Vitæ.

---

* I have retained the original name Retinŏspora, as it is now so generally used in garden literature, in preference to Chamæcyparis, to which Retinospora is so very closely related, to prevent any further confusion.

This kind forms a very neat, dwarf, dense, round bush, and is said to be a hybrid production, raised in America, but in all probability a Japanese plant.

No. 2. RETINOSPORA ERICOIDES, *Zucc.*, the Heath-like Retinospora.

Syn. Chamæcyparis ericoides, *Carrière.*
„ Widdringtonia ericoides, *Knight.*
„ Cupressus ericoides, *Hort.*
„ Juniperus ericoides, *Hort.*

Leaves in threes, but sometimes in opposite pairs, spread out or bent downwards, linear, flat, a quarter of an inch long, frequently slightly convex; marked on the under side with two little glaucous bands, and tapering regularly to the point, decurrent at the base, and mucronate.

This kind forms a regular, conical, compact, pyramidal bush, from four to six feet high, with numerous horizontal branchlets. which are very slender and compact. It is cultivated by the Japanese in pots, under the name of "Nezu" (dwarf), and the whole plant turns to a deep, purplish-brown colour in winter.

It is tolerably hardy.

No. 3. RETINOSPORA FILICOIDES, *Veitch*, the Fern-like Japan Cypress.

Syn. Retinospora obtusa filicoides, *Hort.*

Leaves small, oval, curved, thick in texture, and somewhat obtusely-pointed, keeled on the back, thickly and rather loosely imbricated in four rows, and of a deep glossy green colour. Branches long, narrow, flat, and regularly and thickly furnished, on both sides, with very short, compound branchlets, of the same size along their whole length. Branchlets very short, quadrangular, and of a deep green colour on the upper surface, and more or less glaucous beneath.

A handsome free-growing tree, resembling Retinospora obtusa, found in the Japanese gardens near Yeddo in Japan.

It is quite hardy, and probably only a fine variety of Retinospora obtusa.

No. 4. RETINOSPORA FILIFERA, *Standish*, the Thread-branchletted Japan Cypress.

Leaves ovate, very acute, and spiny-pointed, loosely imbricated, open and spreading at the points, keeled on the back, decurrent at the base, and of a bright green colour, more or less glaucous beneath. Branches open and spreading, with the secondary ones alternate, long, somewhat distant, and furnished principally on one side with numerous branchlets of various lengths; the terminal branchlets are long, slender, undivided, filiform, and frequently eight or ten inches long, with tufts of small spray at their points; while the lateral ones are rather short, somewhat flattened, and bright green on the upper side, and more or less glaucous on the under one.

This kind forms a beautiful tree, fifty feet high, pyramidal in outline, and peculiarly graceful on account of its drooping branches and long pendulous spray.

It is a native of Japan, and is much planted in the gardens about Yeddo, on account of its very elegant appearance.

It is quite hardy.

No. 5. RETINOSPORA JUNIPEROIDES, *Carrière*, the Juniper-like Retinospora.

Syn. Retinospora dubia, *Makoy*.
„ „ decussata, *Hort.*
„ Chamæcyparis decussata, *Hort.*
„ Thuja ericoides, *Hort.*

Leaves heath-like, erectly-spreading, distantly decussate, acute pointed, flat on the upper side, slightly rounded on the back, of a light glaucous green in summer, changing to a purplish-brown in winter, and from two to four lines long. Branches erectly-spreading, much divided and compact. Branchlets slender, flexible, more or less erect, dense, and very numerous.

A small, dense, and very compact pyramidal bush, seldom growing more than three or four feet high, and of a fine glaucous green in summer, but changing to a violet or purplish-brown in winter, and quite distinct from Retinospora ericoides.

It is a native of Japan, and hardy.

No. 6. RETINOSPORA LEPTOCLADA, *Zuccarini*, the Slender or Flat-branchletted Retinospora.

Syn. Retinospora squarrosa leptoclada, *Siebold.*
„ Chamæcyparis squarrosa leptoclada, *Endlicher.*
„ „ Andelyensis, *Hort.*

Leaves of two kinds, the primordial ones being in whorls of three, spreading, and curved more or less backwards; linear, flat on the upper surface, and awl-shaped at the points; thickly placed somewhat spirally all round the shoots, one fourth of an inch long, bright green above, and furnished with two glaucous white bands on the under side, which separate the thickened margins and green mid-rib. The foliage on the mature two-edged branchlets of adult plants are small scale-formed bodies, closely imbricated in four rows, in opposite pairs, the marginal ones being keeled on the back, overlapping on both sides, mucronate, and sometimes a little incurved, and more or less extended at the points, while those along the centre, on the upper and lower sides of the branchlets, are flatly placed in straight rows, of an ovate-rhomboid figure, and glossy-green towards the points, with a transparent gland on the back, and two glaucous white marginal bands, which only extend along the lower half of the leaf, and are partially covered by the points and sides of the hinder leaves. Branches thickly placed along the stem, spreading and horizontal, lateral ones compact, very dense, more or less irregularly clustered towards the points of the branches, and composed of slender, closely imbricated, two-edged, strap-shaped branchlets, little forked, but thickly placed laterally on the fan-shaped spray, in irregularly arranged clusters, especially towards the outer parts of the principal branches. Cones globular, solitary, about the size of a pea, and terminal on the points of the preceding year's branches. Seeds in twos at the base of each scale, with lateral membranaceous wings.

This kind forms a dense compact pyramidal evergreen bush, growing from three to six feet high, furnished with short branches down to the ground, and thickly covered with numerous horizontal branchlets and small spray, closely covered with imbricated, more or less glaucous foliage, which gives the plant quite a silvery-gray appearance.

It is a native of the mountains of Japan, and is much cultivated in the Japanese gardens about Yeddo, where it is called "Nezu" (dwarf), on account of its low, compact, pyramidal appearance.

A very desirable plant for small gardens, as it is quite hardy.

No. 7. RETINOSPORA LYCOPODIOIDES, *Standish*, the Clubmoss-like Retinospora.

Syn. Retinospora monstrosa, *Hort.*

Leaves variously shaped, and densely arranged all round the shoots, those on the upper parts of the principal branchlets being more or less terete-pointed, or bluntly awl-shaped, or slightly flattened on the sides, keeled on the back, and densely arranged more or less spirally all round the branchlets, while those near the base of the principal shoots, and on the lesser spray, are more or less scale-formed, adpressed in opposite pairs, keeled on the back, oval-shaped, closely imbricated, and all of a deep glossy green colour. Branches spreading, and rather slender, with the branchlets and lesser spray scattered irregularly all round, and very dense, especially towards the ends of the branches. Branchlets numerous, short, linear, and thickly placed irregularly along the sides of the lateral branches, with the leading ones frequently confused, and ending in a flattened kind of monstrosity, more or less contorted near the points, and densely covered with small pointed scale-like leaves, sometimes more or less glaucous on the under side.

A fine evergreen tree, resembling Retinospora obtusa, found in the gardens near Yeddo, in Japan.

It was first imported by Mr. Standish, of the Royal Nursery, near Bagshot, in the early part of 1861, through the valuable exertions of his friend, Mr. Robert Fortune.

No. 8. RETINOSPORA OBTUSA, *Siebold,* the Obtuse-leaved Japan Cypress.

Syn. Chamæcyparis obtusa, *Endlicher.*
„ Chamæpeuce obtusa, *Zuccarini.*
„ Retinospora Fusinoki, *Zuccarini.*

Leaves mostly in whorls of four, ovate-rhomboid, blunt, seldom pointed, decussate, all scale-formed, closely pressed along the branchlets, and adhering almost as far as the points, the lower part only being visible; those along the upper and under rows are ovate-rhomboid, obtuse, and seldom acute, while the side or lateral ones are keeled, and lap over at the edges, are somewhat pointed, and almost sickle-shaped; those on the younger plants are more open, longer, and remain on for several years. Branches spreading, lateral ones in two rows, very dense, spreading out like a fan, and of a light shining green colour. Cones solitary on the ends of the branchlets, globular, about the size of a small grape, with eight or ten scales, in alternate opposite pairs. Scales wedge-shaped at the base, widest at the apex, with a plain surface, seldom wrinkled, and of a rich brown colour, with two short-winged seeds at the base of each scale.

A tall evergreen tree, growing from seventy to one hundred feet high, and from three to five feet in diameter, with an erect straight stem.

It constitutes a large portion of the forests in the mountains on the Island of Nippon, in Japan. Its timber is white, fine-grained, compact, and acquires, when worked, the brilliancy of silk; and in consequence of its valuable properties, the Japanese dedicate it to the God of the Sun, and construct chapels and small temples out of its timber, for divine purposes.

This beautiful tree is called "Hen-hak" by the Chinese, and "Fu-si-no-ki" (tree of the Sun) by the Japanese, and is the glory of Eastern forests. There are the following varieties, viz.:—

RETINOSPORA OBTUSA AUREA, *Fortune*, the Golden Variegated Japan Cypress.

This variety differs from the ordinary form of the tree in having a portion of the smaller spray and leaves of a golden colour, intermixed with the usual glossy-green ones, all over the plant.

A nice variegated variety, found by Mr. Fortune, cultivated in the Japanese gardens about Yeddo, in Japan, where it is called "Kwa-furi-hak" (variegated tree of life). It has been introduced by Mr. Standish, of the Royal Nursery, Bagshot, along with the following variety.

RETINOSPORA OBTUSA ARGENTEA, *Fortune*, the Silver Variegated Japan Cypress.

This variety has a portion of its leaves and lesser branchlets of a silvery white, intermixed throughout the branches. It is much cultivated in the gardens about Yeddo, and other parts of the Island of Nippon, in Japan.

RETINOSPORA OBTUSA COMPACTA, *Hort.*, the compact Japan Cypress.

The leaves and branchlets of this variety resemble those of the species in every way, except that they are much smaller, and the plant has a very dense and compact habit.

RETINOSPORA OBTUSA KETELEERI, *Standish*, Keteleer's Variegated Japan Cypress.

This variety resembles the species in every respect, except that about half the branchlets are of a yellow colour; and, when in proper condition, forms a very striking object.

RETINOSPORA OBTUSA PYGMÆA, *Gordon*, the Pigmy Japan Cypress.

Syn. Thuja pygmæa, *Veitch.*
„ Retinospora obtusa nana, *Hort.*

This very singular variety forms a dwarf, cushion-shaped, little bush, which seldom grows more than a foot or two high, but spreads out in a horizontal direction all round, to more than double that distance, and forms a large, dense, flat tuft of glossy-green spray when old, with branchlets and leaves exactly like those of the species.

A very curious miniature evergreen bush, much cultivated in the Japanese gardens about Yeddo, on account of its very dwarf habit, dense, compact appearance, and glossy deep green colour. It is quite hardy, and forms an interesting object for rock-work or miniature gardens.

No. 9. RETINOSPORA PISIFERA, *Siebold*, the Pea-fruited Retinospora.

Syn. Chamæcyparis pisifera, *Endlicher.*

Leaves in four rows, decussate, all scale-formed on the adult plants, and remaining on the plant for five years, those growing over the axis of the branchlets almost adnate even to the apex, but those on the sides adhere only by the lower face; the upper and lower ones are ovate-lanceolate, tapering to a hard point, keeled on the back, and smooth, the lateral ones compressed at the edges on both sides, almost sickle-shaped, equally long, acute-pointed, and marked on the under side with two white glaucous bands. Branches numerous, thickly covered with branchlets, the lateral ones in two rows, and very thickly covered with leaves; male and female flowers on the same plant; the male catkins terminal on the upper branchlets, cylindrical, obtuse, and numerous; female ones terminal in the same manner as the males. Cones ovate-globose, about the size of a large pea, and composed of ten or twelve scales in opposite cross pairs, regularly imbricated. Scales ovate-rhomboid, a little pointed, crenulate, wedge-shaped, and resinous at the base, attenuated, and spread out horizontal at the apex, dilated, raised in the centre, woody, and of a yellowish-brown colour, with a smooth surface. Seeds in twos at the base of each scale, with large membranaceous brownish wings, frequently much broader than the seeds.

A much smaller tree, and slenderer than Retinospora obtusa, with its stem much less elevated, and darker-coloured bark, found on the mountains of Yokohama and Karagan, in the Island of Niphon, in Japan, where it is called "Sawara."

No. 10. RETINOSPORA PLUMOSA, *Hort.*, the Plume-like Japan Cypress.

Syn. Retinospora pisifera plumosa, *Hort.*

Leaves small, awl-shaped, stiff, erectly spreading, in opposite cross pairs, very acute and spiny pointed, concave and glaucous on the upper surface, rounded and deep green on the back, decurrent and glaucous at the base, and about one line long. Branches numerous, erectly spreading, and thickly furnished with branchlets. Branchlets slender, very numerous, short, dense, compact, and thickly clothed with small, acute leaves, more or less glaucous when young.

A very dense, erect, and elegant shrub or small tree, with a plume-like appearance, found in the neighbourhood of Yeddo, in Japan, where it is much cultivated by the Japanese in their gardens.

It is quite hardy, and has the following varieties.

RETINOSPORA PLUMOSA AUREA, *Hort.*, the Golden Plume-like Japan Cypress.

Syn. Retinospora pisifera aurea, *Hort.*

This is a very elegant variety, with all the leading points of the branchlets and lesser spray of a fine golden colour, which they retain all the year round.

It was found by Mr. Fortune cultivated in the gardens about Yeddo, where it is called Kwa-hak (flowering tree of life) by the Japanese.

RETINOSPORA PLUMOSA ARGENTEA, *Hort.*, the Silvery Plume-like Japan Cypress.

The points of the young shoots of this variety are quite white when first they appear, and remain so for about three months, when they gradually change to the usual deep green colour of the species.

It is a very nice and striking variety.

No. 11. RETINOSPORA SQUARROSA, *Siebold*, the Squarrose-leaved Retinospora.

Syn. Chamæcyparis squarrosa, *Endlicher.*
„ Cupressus squarrosa, *Lawson.*

Leaves spiral, or in alternate whorls, spreading, linear, sharp-pointed, decurrent, dense, smooth, and frequently bent, or curved backwards, but somewhat scale-formed, and slightly adpressed on the male and cone-bearing branchlets; those on the young plants are longer, linear, sharp-pointed, spreading, reflexed, and bright glaucous green above, and furnished with two white glaucous bands on the under side, and from three to four lines long, and half a line broad. Branches slender, and gracefully curved towards the extremities. Branchlets numerous, spreading in every direction, and thickly furnished with extended leaves. Male and female flowers separate, but on the same plant. Cones globular, solitary, about the size of a small pea, and terminal on the ends of the preceding year's branches. Scales, ten or twelve in number, in opposite decussate pairs, at first close, afterwards, when mature, irregularly separated, and spread out, wedge-shaped at the base, extended at the summit, and of a brown colour, with two seeds at the base of each scale, surrounded by a large, membranaceous, brown wing, much broader than the seeds, and irregularly marked with numerous little resinous bands.

A large bush or small tree, inhabiting the Island of Kiusiu, in the province of Figo, and the wooded mountains of Yokohama, in Japan. It is also found cultivated in the Japanese gardens about Yeddo as a bush, from four to six feet high, where they have the following variety also in cultivation. It is tender, and called "Sinobu-hiba" in Japan.

RETINOSPORA SQUARROSA VARIEGATA, *Siebold.*

Syn. Chamæcyparis squarrosa variegata, *Endlicher.*

This variety differs in having some of its branchlets and leaves of a white colour, intermixed with the ordinary green ones in a variegated manner.

Gen. SAXE-GOTHÆA. *Lindley.* Prince Albert's Yew.

Flowers monœcious, or male and female separate, but on the same plant; male flowers in spikes, female ones in globular heads.

Fruit composed of several consolidated free scales, formed into a solid fleshy cone.

Seeds a pale brown, glossy, oval nut, with a short, thin, jagged membrane, enveloping the base of the seed only.

Leaves alternate, scattered, or somewhat two-rowed, leathery, and flat.

Named in compliment to his Royal Highness Prince Albert.

A large bush or small tree, found on the mountains of Patagonia.

SAXE-GOTHÆA CONSPICUA, *Lindley,* the Remarkable Saxe-Gothæa.

Syn. Taxus Patagonica, *Hort.*

Leaves alternate, and scattered, or somewhat in two rows on the branchlets, leathery, stiff, linear, or oblong-lanceolate, somewhat sickle-shaped, slightly twisted and reflected, from half to one inch and a half long, and from one to two lines broad, slightly convex on the upper surface, and with a toler ably elevated rib, marked on each side with glaucous bands on the under one, furnished with a very short foot-stalk at the base, and terminating at the summit in an acute point, sometimes a little rounded. Male catkins in terminal spikes or racemes; female flowers in spherical heads in the form of a little cone, on long, slender, terminal foot-stalks, sometimes drooping. Fruit composed of several consolidated free scales, formed into a solid fleshy cone, of a depressed form, with a very irregular surface, owing to many of the scales being abortive, while the ends of the whole retain their original form, are free, rather spiny, and constitute so many tough, sharp tubercles, pointing in all directions. Seeds, a pale brown, glossy, ovate nut, with a short, thin, jagged membrane, enveloping the base of the seed only.

A small tree or bush, growing thirty feet high on the mountains of Patagonia, with very much the appearance of the common yew, but wanting its fine sombre green.

It is called "Maniu" and "Pino" by the Chilians, and is more or less tender.

Gen. SALISBURIA. *Smith.* The Maiden-hair or Ginkgo Tree.

Flowers diœcious, or male and female on different plants; the males in spikes, axillary, and without foot-stalks; the females in terminal clusters, on long petioles.

Fruit drupaceous, or covered with a fleshy pulp, and smooth externally, mostly single from abortion, and enclosed at the base in a small fleshy cup.

Seeds solitary in each fruit, and covered with a smooth, hard, bony shell.

Leaves fan-shaped, on long foot-stalks, lobed, and jagged on the outer margins, and covered on both sides with minute fan-shaped, straight nerves.

Seed-leaves in twos.

Named in honour of R. A. Salisbury, F.R.S., an eminent English botanist.

A large deciduous tree, native of China and Japan.

SALISBURIA ADIANTIFOLIA, *Smith*, the Maiden-hair Tree.

Syn. Ginkgo biloba, *Linnæus*.
„ Salisburia Ginkgo, *Salisbury*.

Leaves deciduous, broadly fan-shaped, flat, leathery, thick rounded on the upper margins, and the same colour and texture on both sides, closely clustered on the short spur-like branchlets, but distant and alternate on the young shoots, fan-like, wedge-shaped at the base, somewhat triangular, and with from two to four lobes, more or less deeply divided, the lobes again irregularly toothed or jagged, and somewhat undulated at the edges, with numerous minute parallel ribs, elevated on both sides, and tapering to the base, where they are united with the foot-stalk, which is as long as the blade of the leaf, of a fine light or yellowish-green, pliant, smooth, and glossy. Branches alternate, mostly ascending, or horizontal, but sometimes declining on the lower part of the tree, lateral ones spreading; branchlets very short, spur-like, and producing each year a cluster of from three to five leaves on the top of each, very closely placed, somewhat vertical. The male catkins appear with the leaves in May, on the wood of the preceding year, or on old spurs, are without foot-stalks, of a yellow colour, and one inch and a half long. The female flowers are produced in (more or less) clusters, on very long foot-stalks, each in part enclosed in small cups at the base, formed by the enlargement of the peduncle. Fruit globular or ovate, one inch in diameter, drupaceous, or fleshy outside, on very long, slender foot-stalks, each containing a single bony nut or seed of a whitish colour. Seeds somewhat globular, tolerably large, covered with a hard, bony shell, smooth externally, and tapering to both ends, and enveloped in a light green, or yellowish fleshy pulp, covered with a smooth, glossy, yellowish skin outside. Seed-leaves in twos.

A large, deciduous tree, with rather a conical-shaped head, and straight stem, covered with a grayish, rough bark when old, and with the sexes on separate trees.

It is found abundantly in China and Japan, growing from 80 to 100 feet high and from six to twelve feet in diameter.

Professor Bunge, who accompanied the Russian Mission to Pekin, states that he saw, near a pagoda, an immense "Ginkgo," with a trunk nearly 40 feet in circumference, and of prodigious height, but still in perfect vigour.

The Japanese names for this tree are "Ginan" (deciduous tree), and "Fusi-kin-go" (buds crowned with leaves in summer). The Chinese call it "Ginkgo" (full of leafless buds in winter), in addition to "Ginan," "Quachow," and "Gin-ki-go" (a tree without leaves in winter).

It is quite hardy, and has the following varieties:—

SALISBURIA ADIANTIFOLIA MACROPHYLLA, *Hort.*

Syn. Salisburia adiantifolia laciniata, *Carrière.*
„ „ macrophylla, *Reynier.*
„ Ginkgo biloba laciniata, *Hort.*

This variety differs from the species, in its leaves being very much larger, some of them measuring ten inches in circumference, and divided in two, three, or five lobes—the principal lobes being again subdivided, and undulated, and irregularly laciniated, or dentated on the edges; a very fine variety, of French origin.

SALISBURIA ADIANTIFOLIA VARIEGATA, *Carrière.*

This variety differs from the ordinary form, by its leaves being variegated and striped with pale yellow. It is a very nice variety.

SALISBURIA ADIANTIFOLIA PENDULA, *Van Geert.*

This variety only differs in having the branches pendulous.

Gen. SCIADOPITYS. *Siebold.* The Parasol Pine.

Flowers monœcious, or male and female on the same plant, but separate, the male ones terminal, the female solitary, and growing from among the scaly buds.

Cones elliptic or cylindrical, obtuse at the ends, large, and solitary.

Scales persistent, leathery, thin, regularly imbricated, wedge-shaped, half-rounded on the upper part, and with a short bractea adhering.

Seeds elliptic, compressed, seven under each scale, with a leathery covering, tapering into a membranaceous wing, attenuating to the base and apex.

Leaves in whorls like an umbrella, persistent, without any foot-stalks, linear, flat, and obtuse-pointed.

Name, derived from 'skidos,' shade, and 'pitys,' pine, the Parasol Pine.

SCIADOPITYS VERTICILLATA, *Siebold*, the Whorl-leaved Sciadopitys, or Parasol Fir.

Syn. Pinus verticillata, *Siebold.*
„ Taxus verticillata, *Thunberg.*

Leaves long, linear, or somewhat falcate, smooth, entire, alternate, persistent, without any foot-stalks, and tapering to an obtuse point, concave and ribbed on the under side, in close tufts of from thirty to forty in number on the ends of the shoots in a sort of whorl in the form of an extended parasol, and remaining on the branches for three or four years. Branches alternate, or in whorls, with the young shoot cylindrical, and without leaves, except towards the top, but covered with persistent scales, which when old fall off, and leave the adult branches marked by their scars; buds terminal, vertically numerous, and scaly, at first imbricated, but afterwards scattered. Male and female flowers on the same plant; the male catkins terminal, somewhat globular; female, solitary, and growing from among the scaly buds, Cones elliptic, cylindrical, obtuse at the ends, solitary, two inches and a half long, and one inch and a half in diameter, and somewhat resembling those of the Pinus cembra. Scales regularly imbricated, wedge-shaped, half-rounded on the outer part, leathery, irregularly reflexed round the edges, rather thin, persistent, and of a grayish-brown colour, bracteas adhering to the scale, and shorter. Seeds elliptic, compressed, seven in number under each scale near the upper parts, with a coriaceous covering, tapering into membranaceous wings, attenuating to the base and apex.

A handsome and very singular evergreen tree, from 80 to 120 feet high, with a straight stem and horizontal spreading branches, and flowering in the spring.

It is found in the eastern part of the island of Niphon, upon the mountains of "Koja-San," in the province of "Kii," and probably on other of the Japan Islands.

The Parasol Fir, according to Mr. Fortune (who first sent living plants of it to Mr. Standish of the Royal Nursery at Bagshot, in 1861), is a large pyramidal tree with horizontal spreading branches, which attains a height of from 100 to 150 feet, and from 10 to 11 feet in circumference, three feet from the ground, and not a large bush or small tree from 12 to 15 feet high, as originally stated by Dr. Siebold, in his "Flora Japonica." The Japanese, however, have several varieties, among which some are dwarf bushes, others beautifully variegated, and others with leaves varying from two to four inches or more in length, and two lines broad: but all linear, a little sickle-shaped, blunt, or slightly notched at the points, leathery, double-ribbed, with a shallow channel running through them, and all spreading out horizontally like the ribs of a parasol, and so closely clustered alternately as to look as if they stood in whorls of from 30 to 40 together at the ends of all the branchlets. Mr. Fortune says they are of a deep green colour, while, according to Dr. Siebold, they must be of a yellowish-green, and remain on the tree for about three years, by which time each branch has from one to three parasols on it, according to its age; but in the fourth year they fall off. The cones are elliptic or cylindrical, obtuse at the ends, and from two and a half to three inches long, and one inch and a half in diameter, and not unlike those of Pinus Cembra, but longer, and require two years to ripen. The seed leaves are in twos, and very similar to those of the common Yew.

Dr. Siebold considers the Parasol Fir the finest conifer of Japan, and one which presents an appearance as strange as elegant, in consequence of its innumerable ramifications, which always end in a parasol-like tuft of leaves. Dr. Lindley says the Sciadopitys is nearly related to the Genus Wellingtonia, a statement which, from all appearances, seems very questionable.

Its Japanese names are "Koja-Maki"* (the wild or Mount Kojasan Maki), and "Inu-Maki" (the spurious or false Maki); while those of the Chinese are "Kin-sung-Maki" (the pale yellow Maki), and "Kin-sjo" (common yellow) on account of the leaves being of a pale or yellowish-green colour when young.

It is quite hardy, and has several varieties, besides the following one—

SCIADOPITYS VERTICILLATA VARIEGATA, *Fortune*, the Variegated Parasol Fir.

This variety differs in having some of its leaves of a pale yellow colour, intermixed in the parasol-like whorls.

It forms a striking object, and is much grown in the gardens belonging to the wealthy Japanese, especially in the eastern part of the island of Nippon, where it is also much planted around temples and other sacred places of worship.

Mr. Fortune first sent it to the Royal Nursery at Bagshot in 1861, from the neighbourhood of Yeddo, in Japan.

---

* Maki is the name commonly applied, both in China and Japan, to all the large-leaved Yew-like plants, such as Podocarpus, Sciadopitys, &c.

Gen. SEQUOIA. *Endlicher.* The Californian Redwood.

Flowers monœcious, or male and female separate, but on the same plant, solitary and terminal.

Cones small, sub-globular, or obtusely oval, and ligneous.

Seeds from three to five under each scale, variously-shaped, and winged.

Leaves two-rowed, flat, and evergreen.

Name probably from "sequence," separated, or following in order of succession, after Taxodium; from which Professor Endlicher separated it.

A lofty tree, found in California and North-west America.

SEQUOIA SEMPERVIRENS, *Endlicher*, the Californian Redwood or Bastard Cedar.

Syn. Taxodium sempervirens, *Lambert.*
„ „ Nutkaense, *Lambert.*
„ Schubertia sempervirens, *Spach.*
„ Condylocarpus sempervirens, *Salisbury.*

Leaves on the lateral branches and branchlets, linear, blunt-pointed, two-rowed, spread out, flat, alternate, straight, rarely falcate, leathery, persistent, shining, dark green, and smooth above, more or less glaucous, and channelled below; from half an inch to an inch long, but much shorter and smaller near the extremities of the shoots; those on the principal branches and terminal points of the flower-bearing branchlets are very short, narrow, sharp-pointed, or scale-formed, somewhat imbricated, or closely spiral, decurrent at the base, ribbed, and glaucous below, those on the leading shoots distant and very acute. Branches spreading, horizontal, rather distant, irregularly scattered alternately along the stem, and furnished with numerous lateral ones in two rows, those nearest the base frequently bent downwards, while those towards the extremity are more elevated. Branchlets very numerous, in two rows, and frequently drooping. Male flowers globular, solitary at the extremities of the branchlets, on slender foot-stalks, thickly covered with very small scale-like leaves. Cones solitary, terminal, somewhat globular, or egg-shaped, rather blunt at the ends, and one inch long. Scales numerous, wedge-shaped, from sixteen to twenty in number, smallest near the base, transversely keeled, very much sunken in the middle, irregularly shaped, wrinkled on the summit, and furnished in the middle of the hollow centre with a stout, horn-shaped, blunt point directed outwards. Seeds from three to five under each scale, variously-shaped, and winged.

The seed-leaves are mostly in twos, but sometimes in threes, ovate-lanceolate, obtuse at the ends, slightly convex, and pale green on the under-side, but of a much darker colour, and somewhat glossy, above.

A lofty evergreen tree, growing from 200 to 300 feet high, and from twenty to thirty feet in circumference. One tree, called by the American settlers "the Giant of the Forest," measures 270 feet high, and fifty-five feet in circumference, six feet from the ground; and there is at St. Petersburgh a horizontal slab of the wood, received by the late Dr. Fischer from the North-west coast of America, which measures fifteen feet in diameter, and 1008 annual rings marks its age. The timber is of a beautiful red colour, fine, and close-grained, but light and brittle, and never attacked by insects. It is the Californian Redwood or Bastard Cedar of the settlers, and was first discovered by Menzies in 1796, on the North-west coast of America; afterwards by Douglas, in 1836; and by the Russians (who first introduced it to Europe in a living state), in 1843; but since which time it has been found growing abundantly on the mountains of Santa Cruz, about 60 miles from Monterey, in California, where Mr. Hartweg found that it averaged 200 feet in height, with trunks from 18 to 24 feet in circumference, quite straight, and clear of branches to a height of 60 feet.

It is quite hardy, but the leaves turn to a purplish-brown in the winter.

SEQUOIA SEMPERVIRENS GLAUCA, *Hort.*, the Glaucous Redwood Tree.

Syn. Taxodium sempervirens glaucum, *Hort.*
„ „ „ albo spica, *Hort.*

Leaves linear, acute-pointed, three lines long, and of a fine glaucous blue tint, particularly on the under side, and either loosely imbricated, or openly disposed round the branchlets, or arranged in two rows laterally. Branchlets long, undivided, narrow, slender, and, when young, pale yellow at the points.

This variety differs from the species in having very much narrower and slenderer branchlets, and very much smaller leaves, and altogether a more thin and open appearance.

Gen. TAXODIUM. *Richard.* The Deciduous Cypress.

Flowers monœcious, or male and female on the same plant, but separate; the male ones in compound pyramidal spikes, the females two or three together, near the base of the spike of male flowers.

Cones globular, ligneous, and with an uneven surface.

Scales imbricated spirally, thick, and raised in the centre.

Seeds irregularly-shaped, woody, and two at the base of each scale.

Leaves in two rows, flat, linear, and deciduous.

Seed-leaves from five to nine in number.

Name derived from τάξος (Yew) and εἶδος (like), from its supposed resemblance to the common Yew.

All deciduous trees, found in North America, Mexico, and China.

No. 1. Taxodium distichum, *Richard,* the Deciduous Cypress.

Syn. Cupressus Virginiana, *Plukenett.*
„ „ „ Tradescanti, *Ray.*
„ „ Americana, *Catesby.*
„ „ disticha, *Linnœus.*
„ Schubertia disticha, *Mirbel.*
„ Taxodium distichum patens, *Endlicher.*
„ „ „ nigrum, *Hort.*
„ Cupressus disticha patens, *Aiton.*

Leaves in two rows, flat, rather distant, pectinate, spread out horizontal, and twisted at the base; linear, tapering to a sharp point, bright green, and thin at the margins, half an inch long, and one line broad, somewhat arched, with the convex side outwards, and changing in the autumn from a light green to a dull red, and soon after falling off. Branches stout, stiff, horizontal, or rising upwards at the ends, lateral ones rather pendulous. Branchlets very slender, and elegantly pinnated. Male and female flowers on the same plant. The male catkins are produced in flexible pendulous aments, and the female ones in very small bunches. Cones somewhat rounded, or roundish-ovate, from one to one inch and a half in diameter, and about the size of a pigeon's egg, hard, and uneven on the surface. Scales thick, slightly striated, dull brown, raised in the middle, with a small mucro in the centre, which soon disappears after maturity. Seeds compressed. This tree is rather pyramidal when young, but when old and full grown has flat, horizontal branches, and becomes a lofty tree, 120 feet high, and from twenty-five to forty feet in circumference at the base, covering large tracts of country in the swamps of the Southern States of North America.

The Deciduous Cypress is found growing along the banks of rivers, and in swamps from the Delaware, which may be considered its northern boundary, to Florida; in Maryland and Virginia it is confined to within view of the sea, where the winters are milder, and the summer more intense. In Carolina and Georgia, it occupies a great part of the swamps which border the rivers in the lowlands, and in East Florida, Louisiana; and those parts of the marshes, where the deciduous Cypress almost alone occupy, are called Cypress swamps, and cover thousands of acres. The Americans call it the "Bald Cypress," the "Black Cypress," and the "White Cypress," as it varies very much in appearance according to soil and situation. The roots of large trees, particularly in very moist situations, produce conical protuberances above ground, frequently from one to two feet high, and sometimes three or four feet in thickness, but always hollow in the centre, smooth on the outside, and covered with a reddish bark, and called Cypress knees by the Indians.

There are the following varieties:—

TAXODIUM DISTICHUM DENUDATUM, *Leroy.*

Branches slender, long, horizontal, or drooping towards the ends, irregularly, and little divided. Branchlets fringed, with scattered, variable, and unequally-distant leaves.

This variety was raised by M. Leroy, nurseryman, at Angiers, in the South of France.

TAXODIUM DISTICHUM FASTIGIATUM, *Knight.*

Syn. Taxodium fastigiatum, *Hort.*
„ „ adscendens, *Brongniart.*
„ Schubertia disticha imbricata, *Spach.*
„ Cupressus imbricata, *Nuttall.*

Branches short, erect, slightly spreading at the top. Leaves two-rowed, and resembling those of the species. This very distinct variety is a much smaller and a more compact tree, with the form of a regular conical pyramid, or fastigiated head. It is found in the marshy grounds along the sea-shore, in Florida and Carolina, forming a small tree.

A very distinct-looking small tree, but certainly not a distinct species.

TAXODIUM DISTICHUM MEXICANUM, *Gordon*, the Montezuma Cypress.

Syn. Taxodium pinnatum, *Hort.*
„ „ virens, *Knight.*
„ „ Montezumæ, *Dunal.*
„ „ Hugeli, *Lawson.*
„ „ Mexicanum, *Carrière.*
„ „ distichum pinnatum, *Hort.*
„ „ „ excelsum, *Booth.*
„ „ „ sempervirens, *Rinz.*
„ „ mucronatum, *Tenore.*

Leaves linear, pointed, evergreen, or nearly so, in two rows, straight, flat, and tapering to a point, with the leaves slenderer, and more persistent than those of the common deciduous Cypress. Branches spread out and slender. Cones rather large, with the scales strongly mucronated.

This variety differs from the species in being nearly evergreen, and much tenderer. It is found growing in Mexico, forming large trees, 120 feet high, and sometimes ninety feet in circumference, close to the ground. It forms large forests between Chapultepec and Tescoco, near Popotla, in Mexico.

The great Montezuma Cypress at Chapultepec, near Mexico, is of this kind, and measures ninety-nine feet in circumference near the ground.

This tree is called "Sabino" by the Mexicans, and yields excellent timber, but is too tender for the climate of England.

TAXODIUM DISTICHUM NANUM, *Carrière.*

Branches numerous, almost horizontal, short, and resembling the species, but easily distinguished by its very small dimensions, forming a very compact bush, ten or twelve feet high.

It was raised by a nurseryman, near Tours, in France.

No. 2. TAXODIUM MICROPHYLLUM, *Brongniart*, the Small-leaved Deciduous Cypress.

Syn. Taxodium distichum microphyllum, *Spach.*

Leaves very variable, in some linear, or ovate-lanceolate, alternate, in two rows, or scattered, those at the base of the shoots, from four to six lines long, tapering to a point, but becoming very much smaller towards the extremities of the branchlets, where they are hardly more than one or two lines long; oval, blunt-ended, and having the appearance of being imbricated.

Nothing is known of this kind beyond the description given by M. Brongniart, who states that it is found in North America. It in all probability is nothing more than a mountain form of the common deciduous Cypress, as no collector or traveller in the United States has discovered it since his time and the circumstance of the leaves becoming much smaller towards the ends of the shoots, is quite a common occurrence in the deciduous Cypress in dry seasons.

No. 3. TAXODIUM SINENSE, *Noisette*, the Chinese Deciduous Cypress.

Syn. Taxodium Sinense pendulum, *Forbes.*
„ „ distichum pendulum, *Loudon.*
„ „ „ nutans, *Loudon.*
„ „ „ Sinense, *Loudon.*
„ Glyptostrobus pendulus, *Endlicher.*
„ Cupressus disticha nutans, *Aiton.*

Leaves alternate, linear-lanceolate, distant, and deciduous; from three to six lines long, without any foot-stalks at the base, and tapering into a sharp point at the apex; those on the young shoots in the early part of the season, are twisted, and compressed round the stem, but more expanded and spread out, like those of the common deciduous Cypress, by the autumn. Branches horizontal, spread out straight, or slightly bent downwards towards the extremities, with the young shoots slender, pendulous, and closely covered with light green leaves, which fall off during winter, and frequently the ends of the young shoots get killed at the same time by the cold.

Cones ovate, or somewhat globular, woody, and light brown. Scales mucronate, and peltate, with two seeds at their base.

A very elegant small tree, growing from twelve to twenty feet high; found in the northern parts of China, and probably in Japan, growing in swampy places.

It is quite hardy.

Gen. TAXUS. *Tournefort.* The Yew.

Flowers diœcious, or male and female on different plants, and axillary.

Fruit solitary, and one-seeded.

Disk a fleshy open cup, and viscid.

Seeds nut-like, with a bony shell, free, and exposed on the upper part.

Leaves linear, decurrent, and alternate.

Seed-leaves in twos, and short.

Name derived either from "taxis," arrangement, from the leaves being placed on the branchlets like the teeth of a comb, or from "toxicum," poison, the common Yew being considered poisonous, or from "toxon," a bow, the wood being much used for that purpose.

The word Taxus, however, like the Greek word "Toxen," a bow, is derived from "Tazo," or "tasso," to draw, to pull; man having learned the arts of war and hunting before his language was perfected. The English name Yew is said to come from the Celtic "iw," green.

All evergreen trees, or bushes, found in the temperate parts of Europe, Asia, and America.

No. 1. TAXUS ADPRESSA, *Knight,* the Short-leaved Japan Yew.

Syn. Taxus tardiva, *Lawson.*
„ „ Sinensis tardiva, *Knight.*
„ „ baccata adpressa, *Carrière.*
„ „ brevifolia, *Hort.*, not *Nuttall.*
„ Cephalotaxus adpressa, *Hort.*
„ „ tardiva, *Siebold.*
„ „ brevifolia, *Hort.*

Leaves oblong, or bluntly oval, rounded at both ends on the lesser branchlets, but much longer and more pointed on those of the leading shoots; more or less two-rowed, flat, rather distant, on very short foot-stalks, decurrent, and terminating at the apex in a very short spiny point, sometimes wanting on the adult ones; from two to four lines long, and one line and a half broad, of a dark glossy green above, and glaucous below on both sides of the middle nerve, the margins and mid-rib being of a glossy light green colour; buds very small, oval, and covered with a few blunt persistent scales. Branches numerous, much divided, horizontally spreading, and sometimes in whorls; lateral ones and branchlets, in two rows, flat, slender, closely placed in clusters towards the extremities, frequently confused, short, and spreading. Fruit like that of the common Yew, but much smaller, and with the seed more exposed.

A dense, spreading, depressed bush, with numerous flat spreading branchlets, thickly covered with flat, sombre green leaves, seldom growing more than six or eight feet high, and found on the mountains of Japan.

It is quite hardy, but of slow growth.

TAXUS ADPRESSA STRICTA, *Standish.*

A seedling variety, raised in the Royal Nursery, Ascot, with upright leading shoots, and a more robust habit.

No. 2. TAXUS BACCATA, *Linnæus*, the Common Yew.

Syn. Taxus baccata vulgaris, *Endlicher*.

Leaves in two rows, crowded, linear, slightly curved, or falcate, pointed, flat, entire, and slightly revolute on the margins; from three quarters of an inch to an inch and a quarter long, and one line and a half broad, of a dark shining green above, much paler below, with a prominent mid-rib, terminating in a small point at the apex. Branches spreading, much divided, and dense; branchlets long, slender, and drooping. Male flowers axillary. Berries rounded, glutinous, drooping, open at the top, and enclosing a brown oval partially naked nut, unconnected with the fleshy disk, which is of a scarlet colour and sweet. Seed-leaves in twos.

A small tree, or large bush, but when fully grown thirty or forty feet high, with a short stem, and ample spreading head, thickly clothed with branches, densely set with drooping branchlets and sombre-green leaves.

It is found in most parts of Europe, at elevations of from 1000 to 4000 feet, is frequent on the Appenines, the Alps, Greece, Spain, Piedmont, Great Britain, the Pyrenees, the Caucasus, and even in Scandinavia, but is wanting in the Russian empire, except on the mountains of the Crimea and Caucasus. There are numerous varieties, of which the following are some of the most distinct.

TAXUS BACCATA ARGENTEA, *Loudon*, the Silver Variegated Yew.

Syn. Taxus baccata, foliis variegatis, *Hort.*
„ „ elegantissima, *Hort.*
„ „ marginata, *Hort,*
„ „ baccata variegata alba, *Carrière.*

This very handsome variety differs, in having silvery white striped leaves, sometimes changing to straw colour.

Taxus baccata Cheshuntensis, *W. Paul*, the Cheshunt Yew.

A nice variety, with rather a pyramidal habit of growth, in the way of Taxus baccata sparsifolia, but with the leaves smaller and more closely disposed all round the shoots; the spray is also much slenderer and more twiggy, with the leaves of a bright glossy green.

It was raised by Mr. William Paul, of the Cheshunt Nursery, from a seed of the Irish Yew, and appears to stand midway between the common and Irish Yews, but less formal than the latter, and grows twice as fast.

Taxus baccata Dovastoni, *Loudon*, Dovaston's Yew.

Syn. Taxus Dovastoni, *Hort.*
„ „ pendula, *Hort.*
„ „ baccata horizontalis, *Hort.*
„ „ umbraculifera, *Hort.*

This variety only differs from the ordinary kind in having its principal branches growing horizontal or pendent, and its branchlets quite drooping; a very striking and handsome variety.

Taxus baccata Dovastoni variegata, *Hort.*

A handsome, pendulous, variegated variety of the Shropshire Yew, with all the leaves when young broadly edged with golden yellow; but which, when fully matured, change to a bright green, edged with silvery white.

Taxus baccata epacrioides, *W. Paul*, the Epacris-like Yew.

This is a rather dwarf and somewhat spreading variety, with small light green leaves. A pretty and distinct variety.

Taxus baccata erecta, *Loudon*, the Erect Common Yew.

Syn. Taxus stricta, *Hort.*
„ „ erecta, *Hort.*
„ „ pyramidalis, *Knight.*

This is a slender variety, with smaller foliage than the common kind, but with a much stiffer and more erect habit, and is called in some collections the Fulham Yew, or Upright Common Yew. A very nice variety, not unfrequently obtained from seeds of the common kind. The Taxus baccata Crowderi is a slight variety of this.

TAXUS BACCATA ERICOIDES, *Hort.*, the Heath-like Yew.

Syn. Taxus ericoides, *Hort.*
„ „ empetrifolia, *Hort.*
„ „ microphylla, *Hort.*
„ „ baccata microphylla, *Hort.*

A small slender, slow-growing variety, with very small dark green foliage, and rather short, erect, slender twigs, very distinct in appearance, and only from one to two feet high.

TAXUS BACCATA FASTIGIATA, *Loudon*, the Irish Yew.

Syn. Taxus baccata Hibernica, *Hort.*
„ „ Hibernica, *Hooker.*
„ „ fastigiata, *Lindley.*
„ „ pyramidalis, *Hort.*, not *Knight.*

This very distinct and singular variety has its leaves in tufts, or scattered along the branchlets, and not two-rowed as in the common Yew, with a fastigiata or broom-shaped head, having all the branches erect, and closely compressed, like those of the Lombardy Poplar. It also differs in having oblong berries, and not rounded ones, as in the common kind. There are the following varieties of it:—

TAXUS BACCATA FASTIGIATA VARIEGATA, *Carrière.*

Syn. Taxus baccata Hibernica variegata, *Hort.*
„ „ fastigiata argentea, *Knight.*

This variety only differs from the Irish Yew, in having a portion of its foliage striped and margined with silvery white or pale straw-coloured blotches.

A very striking variety, of the Florence Court, or Irish Yew, when well variegated.

TAXUS BACCATA FASTIGIATA AUREA VARIEGATA, *Fisher.*

A handsome, golden variegated form of the Irish Yew, raised in the nursery of Messrs. Fisher and Holmes of Sheffield.

TAXUS BACCATA FOXII, *Knight,* Fox's Dwarf Yew.

Syn. Taxus baccata nana, *Hort.*
„ „ Foxii, *Hort.*

A very dwarf kind, with much smaller and darker leaves than the species. It grows little more than one or two feet high, and rather spreading.

TAXUS BACCATA FRUCTU-LUTEO, *Loudon,* the Yellow-berried Yew.

This only differs from the common Yew in the colour of its berries, which are of a beautiful golden yellow, and very handsome.

TAXUS BACCATA GLAUCA, *Carrière,* the Glaucous Yew.

Syn. Taxus baccata sub-glaucescens, *Jacques.*
„ „ „ nigra, *W. Paul.*

This is a very vigorous kind, with the leaves dark green above, and bluish or glaucous gray on the under part, and with the bark on the young shoots of a rusty brown colour.

TAXUS BACCATA JACKSONII, *W. Paul,* Jackson's Weeping Common Yew.

Syn. Jackson's Weeping Yew, *Hort.*

A nice pendulous kind, with broad light-green foliage, all more or less incurved, falcate, and thickly covering the upper part of the branches, with the branchlets reddish-brown, numerous, short, obliquely placed, and more or less curved.

TAXUS BACCATA NANA, *W. Paul*, the Dwarf conical Yew.

This variety forms a nice dwarf, compact, conical bush, with the leaves longer, and of a darker and more glossy green than those of the common Yew. A very desirable kind on account of its dwarf, dense, and compact habit.

TAXUS BACCATA NIDPATHENSIS, *W. Paul*, the Nidpath Castle Yew.

This is a nice variety, with rather a columnar than pyramidal habit of growth, and with a tendency to spread at the top.

TAXUS BACCATA RECURVATA, *Carrière.*

Syn. Taxus recurvata, *Lawson.*

This kind has long straggling branches spread out and little divided, but very frequently reflected. Leaves longer and straighter than the common kind, with the margins involute.

TAXUS BACCATA SPARSIFOLIA, *Loudon*, the Scattered-leaved Yew.

Syn. Taxus baccata monstrosa, *Hort.*
" " monstrosa, *Hort.*
" " Mitchelli, *Hort.*

This variety has its leaves disposed round the branches as in the Irish Yew, but with its branches spreading like the common Yew.

TAXUS BACCATA VARIEGATA, *Loudon*, the Variegated Yew.

Syn. Taxus baccata variegata aurea, *Carrière.*

This is a very handsome variety, with its leaves mostly edged with a golden yellow colour.

No. 3. TAXUS BREVIFOLIA, *Nuttall*, the Western or Californian Yew.

Syn. Taxus Boursieri, *Carrière.*
" " baccata Americana, *Douglas.*
" " Lindleyana, *Murray.*
" " Occidentalis, *Nuttall.*

Leaves arranged in two rows, flat, narrow, acute-pointed, and somewhat curved on the branchlets, but more or less scattered on the leading shoots and principal branches, from three-quarters to an inch long, and nearly a line broad, linear-falcate, rarely straight, of a glossy yellowish green, with a projecting rib down the middle on the upper surface, and glaucous below, except on the margins and mid-rib, which are of a glossy green, with a yellowish foot-stalk one line long, a little enlarged at the base, and decurrent. Branches slender, very long, pendulous, and covered with a yellowish bark. Fruit solitary on the under side of the branches, and exactly like those of the Irish Yew (Taxus baccata fastigiata). Seeds nearly globular, and yellowish brown. Wood very elastic, and used by the Indians to make bows.

This kind, according to Murray, is a handsome tree, growing thirty or forty feet high, and from four to five feet in girth, five feet from the ground, and found growing on the sides of glens, under the shade of large trees, in Northern California. M. Boursier, the French traveller, discovered this species in 1854, growing along the banks of running streams on the higher mountains of Northern California, in company with large trees of Abies Douglasii and Pinus Lambertiana. Douglas found it abundantly at the confluence of the Columbia, in 1825, and to the northwards, but slightly differing in appearance from the common Yew.

It is called "Wa-wa-meéns" (fighting-wood) by the Indians along the north-west coast of America, on account of its wood being used by them for making bows.

No. 4. Taxus Canadensis, *Wildenow*, the Canadian Yew.

Syn. Taxus baccata Canadensis, *Loudon.*
" " " minor, *Michaux.*
" " procumbens, *Loddiges.*
" " Canadensis major, *Knight.*

Leaves linear, crowded, rather narrow, mostly straight, but sometimes slightly curved, extended, somewhat in two rows, revolute on the edges, decurrent at the base, on very short foot-stalks, abruptly tapering to the apex, terminating in a spiny acute point, and from three-quarters to one inch long, and one line broad, of a pale yellowish glossy green above, and a little rusty below; buds covered with blunt, ovate, persistent scales, which remain on for a long time at the base of each successive growth, in a withered state. Branches slender, rather numerous, and spreading out horizontally, seldom ascending, but sometimes more or less bent down at the extremities; branchlets arranged in two rows, and somewhat pendent. Male catkins globular, always solitary, and at the base of the leaf on the under side of the branchlets. Fruit like those of the common Yew, but very much smaller. Seed-leaves in twos.

A low, spreading bush, growing three or four feet high, and readily distinguished from the Taxus baccata by the brownish appearance both of its leaves and bark, found in North America, particularly in Canada, and along the banks of the Antictem River, in Maryland, and in shady rocky places along the Columbia River.

It is quite hardy.

TAXUS CANADENSIS WASHINGTONI, *Hort.*, Washington's Canadian Yew.

Syn. Taxus Washingtoni, *Hort.*
" " Canadensis aurea, *Hort.*

This is a strong-growing variety, with large curved leaves more or less tinted with a rich golden hue. A very fine variety, of American origin.

No. 5. TAXUS CUSPIDATA, *Siebold*, the Abrupt-pointed Yew.

Leaves linear, all more or less curved upwards, alternate, stiff, leathery, and scattered along the principal leading shoots, but somewhat two-rowed, and denser on the branchlets, from three-quarters to one inch long, and one line broad, on rather long foot-stalks, broadly decurrent at the base, abruptly pointed, with a short, rigid, spiny point at the apex, deep glossy green above, and pale yellowish green below, but not glaucous, and with the thickened margins and mid-rib of a glossy green; buds covered with oval, acute-pointed, imbricated scales, keeled on the back. Branches numerous and spreading. Branchlets rather stiff and angular, on account of the wide decurrent base of the leaves. Fruit unknown.

A large, handsome bush, densely clothed with somewhat ascending branches, and dark-green foliage, growing from fifteen to twenty feet high, found on the Island of Jezo, in Japan, where it is much cultivated in the town gardens, and called by the Japanese "Araraji."

It is quite hardy.

No. 6. TAXUS GLOBOSA, *Schlechtendahl*, the Mexican Yew.

Syn. Taxus baccata Mexicana, *Hartweg*.

Leaves linear, slightly curved or falcate, narrow, rather closely placed in two rows along the shoots, tapering to both ends, and furnished with an acute, spiny point, from three-quarters to one inch long, and one line broad, on rather long, twisted foot-stalks, decurrent at the base, dark glossy green, with an elevated nerve along the middle on the upper surface, but very much paler below, with the mid-rib and margins of a dark green colour; buds furnished with persistent blunt-pointed scales, keeled on the back. Branches long, spreading, much divided, and thickly furnished with extended branchlets. Branchlets very slender, more or less drooping at the points, scattered irregularly in two flat horizontal rows, mostly forked, and very extended. Male and female flowers on separate trees, lateral and solitary on the under side of the branchlets. Fruit about the size of those of the common yew, but with the cup more cylindrical and bell-shaped, and the nut or seed flattened, globular, and more exposed. Seed-leaves in twos.

A handsome, large bush, or small tree, with quite the appearance of the common Yew, furnished with numerous branches to the ground, found plentiful on the mountains of Guajolota and Real del Monte, in Mexico.

It is tolerably hardy.

No. 7. TAXUS WALLICHIANA, *Zuccarini*, Dr. Wallich's Yew.

Syn. Taxus virgata, *Wallich*.
„ „ nucifera, { *Royle*, and other writers on Indian Coniferæ.
„ „ baccata Indica, *Madden*.

Leaves linear, tapering to an acute point, rather distant, slightly curved or falcate, regularly two-rowed, alternate, convex above, and revolute on the margins, from one inch to one inch and a half long, and one line broad, with rather a long, twisted foot-stalk, decurrent at the base, of a deep glossy green, with an elevated nerve along the middle on the upper surface, much paler and not glossy below; buds small, with persistent, ovate, blunt-pointed scales. Branches long, slender, much spreading, and of a light-brown colour. Branchlets very slender, long, undivided, more or less pendent, and nearly the same size all their length. Male flowers lateral on the under side of the branchlets, and consisting of a number of scales, out of which eight or ten connected anthers grow, like minute clusters of primroses; the female ones, which are on a separate plant, are enveloped in scales, from which they gradually emerge, and when ripe, are open at the top, displaying the nut or bony-shelled seed seated in a red, fleshy cup. Seed-leaves in twos.

A fine evergreen tree, forming beautiful forests in Northern India, some trees measuring fifteen feet in girth four feet from the ground. It is common on the Mountains of Nepal, between 8,000 and 10,000 feet of elevation, and in Kamaon, Gurhwal, Kedarkanta, Sirmore, on the Mountains of Tibet, and between Moulmein and Northern Siam, as well as in Sikkim, where it does not descend below 9,000 feet.

This species is common in the British Himalayas and Bhotan, flourishing best between 8,000 and 9,000 feet of elevation, but ascending in a dwarfish form to 11,800 feet. In Kunawur and Gurhwal it is called "Rikaling," "Ikaling," and very commonly "Sung-cha" (Yew-tree), or "Pung-cha" (Tea-tree), and from the leaves and smaller twigs of which, according to Captain Strachey, the people of Ladakh make an inferior kind of black tea, under the name of "Zang-cha," the first infusion of which, if used, would heat the blood, and occasion pains in the limbs. In the damp climate of Sikkim it does not descend below 9,000 feet, and is very rare on the inner ranges, and unknown on the rearward ones, but attains to a large size in Kooloo, and on the Chumba ranges, at an altitude of 9,000 feet, where it forms large forests; but of all the places in the Himalayas where it is met with in greatest perfection, is at Tonghnath, at an elevation of 9,000 feet, where it occurs in company with Abies Smithiana.

The leaves and bark are used for tea by the hill people, and is called "Thoona," or "Thooner-Birmee," in the British Himalayas; "Loosah," by the mountain people in Kamaon; "Ting-shi," in Sikkim; "Pung-cha," in Kunawur; and "Dheyri," or "Lolsi," in Nepal. The people of Ludakh import the leaves and bark of the "Pung-cha" (Tea-tree) from Kunawur, not only for tea, but also as yielding a red dye, under its Cashmere name of "Chatoong." The leaves, when gathered for tea, are first exposed in the sun for two days, and afterwards, when dry, mixed with gum, to give them the appearance of tea.

Most writers on Indian Coniferæ unaccountably confound this kind with the Japan Taxus nucifera of Thunberg (now Torreya nucifera), an error which Professor Zuccarini pointed out in his Morphology of the Coniferæ, pp. 52, 53, after examining Dr. Wallich's specimens; and, ascertaining that the Indian plant was a true Yew, and not a Torreya, gave it the name of Taxus Wallichiana, in compliment to Dr. Wallich.

It is quite hardy, and worthy of being tried, along with the common Yew, as a substitute for Tea, in the same way as used by the hill people of India; for it is very well known that cattle, eating the fresh green leaves and shoots of the common

Yew, are poisoned, while if eaten in a dried state, they are perfectly harmless.

Gen. THUIOPSIS. *Siebold.* The Broad-leaved Arbor-Vitæ.

Flowers monœcious, or male and female on the same plant, but separate, solitary, and terminal, the male ones cylindrical catkins, the females somewhat globular.

Cones ligneous, sub-globular, and composed of eight or ten valvated, opposite, imbricated scales.

Scales wedge-shaped, leathery, valvate, more or less orbicular, concave, smooth, and persistent.

Seeds five at the base of each scale, orbicular, compressed, and free, with a membranaceous wing on each side.

Leaves scale-formed, in opposite cross pairs, regularly and closely imbricated in four rows, flattened on the upper and under surfaces.

Name derived from "Thuia," the Arbor-vitæ, and "opsis," like, resemblance to the Arbor-Vitæ.

A majestic evergreen tree, found in moist situations in Japan.

No. 1. THUIOPSIS DOLABRATA, *Siebold*, the Hatchet-leaved Arbor-Vitæ.

Syn. Thuja dolabrata, *Thunberg.*
„ Platycladus dolabrata, *Spach.*

Leaves in four rows, scale-formed, decussate, broad, thick, ovate, rounded at the points, and imbricated, convex above, furrowed along the middle, and of a beautiful shining deep green, concave-margined, and silvery white beneath, with the marginal ones clasping over on each side, and connected at the base with the adpressed flat upper and lower ones to such an extent as to appear on the under side of the branchlet, as one leaf surrounding the branchlet, and three-rowed on both sides, with the two outer ones narrowest and slightly curved inwards at the points, while the centre one is very broad, and quite rounded. Branches vertical, open, and pendulous at the ends, lesser or lateral ones flattened, with the branchlets placed in two rows; branchlets two-edged, very numerous, alternate, flattened, and irregularly divided. Cones small, ovate, without any foot-stalks, squarrose and consisting of eight or ten woody scales, reflexed at the apex, and covering five two-winged seeds.

A tall evergreen tree, from forty to fifty feet high and from one to two feet in diameter, with a pyramidal-shaped head, and vertical branches drooping towards the points, and according to Professor Thunberg, "a lofty, vast, and beautiful tree, of all evergreens the fairest."

It is found on the moist slopes of valleys in the Island of Niphon, in Japan, and at Fakonia, where, after passing over the mountains of that name on the road to Yeddo, it is planted by the road sides between Miaco and Yeddo. It is also cultivated in pots by the Japanese.

Its Japanese names are "Asufi," and "Asu-naro" (white or silvery beneath), and that of the Chinese, "Gan-si-hak" (white on the under side—tree of life). The term "Hak" (tree of life) is applied to all the Arbor-Vitæs in China, on account of their being green at all seasons of the year.

The tree is quite hardy, and prefers a shady situation, and one that is rather moist. There are the following varieties:—

THUIOPSIS DOLABRATA NANA, *Siebold*, the Dwarf Hatchet-leaved Arbor-Vitæ.

Syn. Thuiopsis lætevirens, *Lindley*.
„ „ dolabrata lætevirens, *Hort.*

This variety forms a very neat, erect, dense bush, seldom exceeding four or five feet in height, with very small leaves and branchlets, of a light shining green colour, like an erect Lycopod.

It is extensively cultivated in the gardens about Yeddo, in Japan, particularly in pots, and called "Nezu" by the Japanese.

It is perfectly hardy, and a very desirable little shrub for rockwork and small gardens.

THUIOPSIS DOLABRATA VARIEGATA, *Fortune*, the Variegated Hatchet-leaved Arbor-Vitæ.

This variety differs from the original form of the tree in having a portion of its lesser spray and leaves of a pale yellow colour, intermixed on the branches, all over the plant.

A pretty variegated variety, first introduced to the Royal Nursery at Bagshot by Mr. Fortune, in 1861, from the gardens near Yeddo, in Japan.

Gen. THUJA. *Linnæus.* The American Arbor Vitæ.

Flowers monœcious, or male and female on the same plant, but separate; the male catkins oval, the female ones solitary and terminal.

Cones ovate-oblong, solitary, terminal, leathery, and smooth, with a projecting tubercle below the apex of each scale.

Scales valvate, from six to ten in number, in opposite pairs, and mostly unequal in size.

Seeds in twos at the base of each scale, and furnished with a transparent wing, emarginate at the end.

Seed-leaves in twos.

Leaves in opposite pairs, very small, scale-like, imbricated, compressed, and in four rows.

The name *Thuja* is derived from "Thyon," sacrifice, in consequence of the twigs and resin being formerly used in the East instead of incense in sacrifices. The common English name, Arbor-Vitæ (tree of life), is deduced from its China and

Japan ones. In Japan it is called "Hiba" (tree of life), and in China "Hak" (everlasting life), on account of the plants being evergreen, and of a lively or bright green at all seasons of the year. But as the Genus *Thuja* is now defined, only one of the China or Japan kinds belong to it, all the others being transferred to that of *Biota.*

No. 1. THUJA DUMOSA, *Gordon*, the Bush Arbor-Vitæ.

Syn. Thuja Occidentalis dumosa, *Hort.*
„ „ „ nana, *Carrière.*
„ „ minor, *Wm. Paul.*
„ „ pygmæa, *Hort.*
„ „ nana, *Hort.*
„ „ prostrata, *Hort.*
„ „ plicata Llaveana, *Hort.*
„ „ „ dumosa, *Hort.*
„ „ recurva nana, *Hort.*
„ „ Antarctica, *Hort.*
„ Biota prostrata, *Hort.*

A spreading little bush, densely clothed with numerous short, tufted, flat, fan-shaped branches, growing in all directions, and thickly set with short, forked, two-edged branchlets, of a glossy light-green above, but much paler below, and furnished on the back rib with an elevated transparent gland.

This kind forms a dense, dwarf, little, confused bush, with numerous short, fan-shaped branchlets, seldom growing more than two or three feet high, somewhat resembling in its branchlets the Nootka Sound Arbor-Vitæ (Thuja plicata), but of a much lighter colour.

It is said to be found in the Antarctic regions, and is quite hardy.

No. 2. THUJA GIGANTEA, *Nuttall*, the Gigantic Arbor Vitæ.

Syn. Thuja plicata, *Lambert*, not *Donn.*
" " Lobii, *Veitch.*
" " Lobbiana. *Hort.*
" " Douglasii, *Nuttall.*
" " Menziesii, *Douglas.*

Leaves in alternate opposite pairs, closely imbricated, and without any gland on the back; those on the branches are more distant, enlarged at the base, decurrent, and tapering to an acute point, while those on the branchlets are very flat, closely placed, regularly imbricated in four rows, much shorter, more rounded, and furnished with a short spiny point; the marginal ones being more or less lanceolate, bristle-pointed, and lapping over on each side, but extended at the points. Branches spreading flat, more or less horizontal, irregularly scattered along the stem, slender, and of a deep brown colour. Branchlets flattened, short, slender, flexible, alternately two-rowed, and nearly all on the inner side, quite straight, linear, and undivided. Cones small, oval, tapering to both ends, nodding, and solitary at the extremities of the short branchlets, and very much resemble those of the common American Arbor-Vitæ, but much more swelled in the middle, and more regularly attenuated, or tapering to both ends, and with the scales much larger, more tapering, and much rounder or obtuse at the apex.

A fine graceful tree, found on the North-west coast of America and California, growing from 50 to 150 feet high, with long flexible branches, thickly clothed with branchlets. It is the yellow cypress of the colonists, and the Indians on the N. W. coast of America call it "Noo-wy-as" (Cedar), and, according to Sir E. Belcher (in his voyage round the world), its timber is very fine grained, bright yellow, very valuable, and much used at the Russian settlement of Sitcha for building purposes; and that the natives at Nootka Sound manufacture their cloaks of its inner bark, which turns the rain, is very pliable and soft, and is in use for mats, sails, ropes, clothing, &c.;

the bark, which is rather thin, is also used in covering the roofs of houses and other buildings.

THUJA GIGANTEA ERECTA, *R. Smith*, the Erect Giant Arbor-Vitæ.

Syn. Thuja Lobbii erecta, *Hort.*

This is a much closer and a more upright growing kind than the species, and of a brighter green; it is a nice and distinct kind.

THUJA GIGANTEA VARIEGATA, *Hort.*, the Variegated Giant Arbor-Vitæ.

Syn. Thuja Lobbii variegata, *Hort.*

This is a handsome, variegated variety, with a considerable portion of the branchlets of a pale yellow colour, distributed irregularly all over the plant.

No. 3. THUJA OCCIDENTALIS, *Linnæus*, the American Arbor-Vitæ.

Syn. Thuja Theophrasti, *Bauhin.*
„ „ obtusa, *Mœnch.*
„ Cupressus Arbor-Vitæ, *Targioni.*

Leaves very small, in opposite pairs, ovate-rhomboid, blunt-pointed, closely imbricated and flattened, thickly pressed along the branchlets, in four rows, and with an elevated gland on the back of the upper and under ones, which are the broadest, while the marginal ones lap over on both sides; those on the older branches are more distant, acute, extended at the points, decurrent, and of a dull yellowish green, strongly scented when bruised. Branches distant, horizontal, and irregularly scattered along the stem; smaller ones drooping, and twisted in various directions; branchlets spread out laterally, numerous, two-edged, alternate, short, flattened, ramified, and covered with numerous small leaves of a bright shining green colour. Cones obovate, four lines long, solitary, on short foot-stalks, covered with small, scale-like leaves. Scales mostly six in number, oblong, and spreading at the points, the centre one truncate, and divided to the base, and each containing two seeds. Seeds very small, surmounted by a short wing, emarginate at the end.

A large bush or tree, growing in its native country from forty to fifty feet high, furnished to the ground with loose, spreading branches, and found in most parts of North America, from Canada to the mountains of Virginia and Carolina, but rather scarce in the Southern States, and only on the banks of mountain streams. It is found abundantly on the Hudson, and very common in Lower Canada, New Brunswick, Vermont, and the district of Maine. There are the following varieties:—

THUJA OCCIDENTALIS ARGENTEA, *Carrière.*

This has some of the branchlets of a silvery white colour, intermixed with the ordinary ones on the plant.

THUJA OCCIDENTALIS COMPACTA, *R. Smith*, the Compact American Arbor-Vitæ.

This variety is conical in outline, very compact in its growth, and appears to be intermediate between the American and Siberian Arbor Vitæs. It originated in the nursery of Mr. Richard Smith, of Worcester.

THUJA OCCIDENTALIS CRISTATA, *Cripps*, the Crested Arbor-Vitæ.

A distinct variety with small, deep green, closely arranged, spreading branchlets of various sizes, frequently recurved, and cock's-comb shaped, towards the ends of the branches.

THUJA OCCIDENTALIS DENSA, *Gordon*, the Bagshot Park Arbor-Vitæ.

Syn. Thuja compacta, *Standish*, not *Smith.*
„ „ Caucasica, *Hort.*

A fine, dense, conical bush, with short, stout, compact branches, and horizontal, flat, fan-shaped branchlets of a rich glossy colour, regularly imbricated with ovate, compressed, glossy-green leaves, arranged in four rows.

This kind forms a large, compact, pyramidal bush, growing from twenty to thirty feet high, and nearly as dense as the Chinese Arbor-Vitæ. It somewhat resembles the Thuja plicata, but is of a much brighter green, and less coarse in its branchlets.

Some fine old plants of this kind are to be seen in the pleasure-grounds at Bagshot Park, the former residence of Her Royal Highness the Duchess of Gloucester, in Surrey.

THUJA OCCIDENTALIS GLOBOSA, *Hort.*, the Globular Arbor-Vitæ.

This variety forms a dwarf, dense, globular bush, which, except in stature and outline, is very similar to the common form of the American Arbor-Vitæ.

THUJA OCCIDENTALIS HOVEYI, *Hort.*, Hovey's American. Arbor-Vitæ.

Syn. Thuja Hoveyi, *Hort.*

This variety forms a round, compact bush, with numerous flat branchlets, and strap-shaped spray, closely imbricated with ovate, bright green leaves, mostly furnished on the back with a transparent gland. It is slenderer, smaller, and of a much lighter green than the species, and of American origin.

THUJA OCCIDENTALIS PENDULA, *Gordon*, the Reverted-branched Arbor-Vitæ.

This variety differs in having the principal branches along the main stem in a reverted position, and in the branchlets being more densely clustered or tufted towards the ends of the branches, and in a more declining position.

The original plant is in Mr. Standish's Nursery at Bagshot.

THUJA OCCIDENTALIS VARIEGATA, *Loudon.*

Syn. Thuja variegata, *Marsh.*

This only differs in having some of the branchlets of a pale yellow colour, intermixed with the ordinary light green ones on the plant.

Thuja Occidentalis Vervaeneana, *Hort.*, the New Belgian Variegated Arbor-Vitæ.

Syn. Thuja Vervaeneana, *Van-Geert.*

This is a pretty golden-tinted variety, with very slender branchlets, raised, by M. Vervaene, of Ghent, from the common American Arbor-Vitæ.

Thuja Occidentalis Walthamensis, *Wm. Paul*, the Waltham Cross seedling Arbor-Vitæ.

This kind forms a handsome, dense, pyramidal bush, from six to eight feet high, and appears to be intermediate between the American and Tartarian Arbor-Vitæs.

It is a fine hardy kind, raised in the Waltham Cross Nursery, in Hertfordshire.

No. 4. Thuja plicata, *Donn*, the Nootka Sound Arbor-Vitæ.

Syn. Thuja Occidentalis plicata, *Loudon.*
„ „ „ compacta, *Knight.*
„ „ „ asplenifolia, *Hort.*
„ „ Orientalis flagelliformis, *Hort.*
„ „ Wareana, *Booth*, not of others.
„ „ flagelliformis, *Hort.*
„ „ odorata, *Marshall.*

Leaves, on the adult plants, ovate, blunt-pointed, regularly imbricated in four rows, quite flat, entire, smooth, shining bright green above, and dull glaucous green below; those on the upper and under sides of the branches and branchlets having a conspicuous elevated gland on the back rib towards the point, and are much broader and less pointed than the side or marginal ones, which lap over on both sides, and appear shorter, more pointed, and regularly jointed, while those on the young plants are very much pointed, particularly the marginal ones, which appear nearly lanceolate, and extended at the points, decurrent at the base, loosely imbricated, and rarely showing the gland on the back; but as the plant matures, they gradually develop, and the leaves become ovate, more closely flattened along the stems, blunt-pointed, and the branches more rounded along the edges, jointed, and two-edged. Branches horizontal, rather short, flattened lengthways, spreading, rather compact, and scattered along the stem, with the smaller or lateral ones alternate, regularly two-rowed, straight, quite flat, and pointing outwards at an acute angle. Branchlets long, straight, linear, flat and two-edged, regularly jointed, and entirely covered with ovate, blunt-pointed, closely flattened leaves, in opposite pairs, as if plaited, with a row of transparent glands along both sides on the back of the leaves. Cones small, solitary, nodding, scattered, and ovate-oblong. Scales elliptic, blunt at the ends, flat, partially furrowed, and mostly six in number, each containing two seeds, inversely heart-shaped, and surrounded by a transparent wing, emarginated at the apex.

A small tree, resembling the American Arbor-Vitæ, thickly clothed with spreading, light green branches, found along the western shores of North America at Nootka Sound, and, according to some writers, extending into Northern Mexico.

It is quite hardy, and differs from the common American Arbor-Vitæ in having the branches very much shorter, more compact, stouter, and densely covered with small ovate, flattened leaves, bluntly pointed, and in four rows, with a plaited or jointed appearance.

THUJA PLICATA VARIEGATA, *Carrière*, the Variegated Nootka Sound Arbor-Vitæ.

Syn. Thuja Wareana variegata, *Hort.*

A pretty variety, only differing from the original form in having a portion of its leaves and lesser spray of a pale yellow, intermixed all over the plant in a variegated manner, and in its less robust habit.

It is of French origin.

THUJA PLICATA MINIMA, *R. Smith*, the Miniature Plicate-branched Arbor-Vitæ.

This is a very compact, miniature variety, so slow in growth, that its average annual growth does not exceed an inch in length.

No. 5. THUJA STANDISHI, *Gordon*, Standish's Japan Arbor-Vitæ.

Syn. Thuiopsis Standishi, *Gordon.*
„ Thuya Japonica, *Maximo*, not *Siebold.*
„ „ gigantea Standishi, *Parlatore.*

Leaves ovate, blunt-pointed, in opposite pairs, and closely imbricated in four rows along the branchlets, the marginal ones clasping over on each side, and overlapping the adpressed upper and lower ones, so as to have the appearance of being arranged in three rows on each side of the flat two-edged branchlets, with the two outer ones the narrowest, and slightly curved inwards at the points, while the central or flattened ones above and below are broad, blunt-pointed, more or less enclosed by the marginal ones, and all of a deep glossy green above, and dull glaucous white below, except the midrib and thickened margins, which are of a bright glossy green and glandless, but thickened at the points. Branches scattered all round the stem, distantly placed, spreading, and more or less horizontal or declining towards the ends. Branchlets and smaller spray two-edged, flat, alternate, quite straight, linear, closely imbricated in four rows, and of a deep glossy green above, and dull glaucous white below. Cones small, and like those of the American Arbor-Vitæ, composed of valvate scales.

A tree, somewhat resembling Thuiopsis dolabrata in general appearance, but with slenderer branches, and smaller leaves, much less silvery below.

This kind was first introduced by Mr. Standish, of the Royal

Nursery at Bagshot, in the early part of 1861, through his friend, Mr. Robert Fortune, who discovered it near Yeddo, in Japan. It has been named in compliment to Mr. John Standish, who has been the means of introducing and disseminating so many beautiful and valuable Eastern plants throughout Europe and America. It is quite hardy and very distinct.

No. 6. THUJA TATARICA, *Loddiges*, the Tartarian Arbor-Vitæ.

Syn. Thuja Tatarica Wareana, *Hort.*
„ „ Sibirica, *Linnæus.*
„ „ „ compacta, *Knight.*
„ „ „ Wareana, *Hort.*
„ „ Occidentalis Wareana, *Knight.*
„ „ Wareana, *Hort.*
„ „ pyramidalis, *Tenore.*
„ „ Australis, *Hort.*
„ „ Orientalis Tatarica, *Lawson.*
„ Biota Tatarica, *Loudon.*
„ „ „ Wareana, *Hort.*
„ „ Wareana, *Hort.*
„ „ pyramidalis, *Carrière.*
„ „ Orientalis Tatarica, *Endlicher.*

Leaves in opposite alternate pairs, closely imbricated in four rows, bluntly oval, thick at the points, somewhat flattened, and furnished with a transparent gland on the back. Branches thickly set on the main stem, somewhat horizontal, rather flat, dense, compact, fan-shaped, and thickly placed in two horizontal rows along the lesser spray. Cones identical with those of the American Arbor-Vitæ.

The Tartarian, or, as it is sometimes called, the Siberian Arbor-Vitæ, has been misplaced in the Genus Biota by Mr. Loudon and nearly all modern writers, although it strictly belongs to the Genus Thuja, as now defined, it having cones exactly similar to those of the American Arbor-Vitæ, with valvate scales, containing two emarginate winged seeds at the base of each.

This kind was originally raised many years ago by Mr. Ware, a nurseryman at Coventry, and forms a dense conical bush, furnished with branches down to the ground, and from eight to ten feet high.

Gen. TORREYA. *Arnott.* The Stinking Yews.

Flowers diœcious, or male and female on different plants. Males solitary; females in twos or threes, and erect, and all axillary.

Fruit one-seeded, drupaceous, or fleshy on the outside like the common plum.

Seeds singly in each fruit, with the albumen ruminated like the inside of the common nutmeg, and covered with a hard bony shell.

Leaves linear, or lanceolate, decurrent at the base, and either opposite or alternate.

Seed-leaves in twos.

Named in compliment to Dr. Torrey, the celebrated American botanist, and one of the authors of the North American Flora.

All small evergreen trees, found either in North America, China, or Japan, and emitting a strong disagreeable smell from all parts when bruised.

No. 1. TORREYA CALIFORNICA, *Torrey*, the Californian Nutmeg.

Syn. Torreya myristica, *Hooker.*

Leaves in two rows, long, narrow, and opposite on the branchlets, but somewhat alternate and scattered round the stems and principal shoots, linear-lanceolate, mostly quite straight, but sometimes slightly falcate, tapering to a long acute spiny point, somewhat lanceolate at the summit, and tapering into a very short twisted foot-stalk, decurrent at the base; from two to two inches and a half long, and one line and a half broad, of a pale yellowish green, without any mid-rib, and slightly convex on the upper surface, but much paler on the under one, and marked longitudinally on each side of the centre nerve, with a narrow sunken band, whitish when young, but afterwards assuming a brown colour. Buds covered with persistent oval scales. Male catkins axillary, and solitary; female flowers in twos or threes on short peduncles, and axillary. Fruit elliptic, and from one inch and a quarter to one inch and a half long, with a thin fleshy or leathery green covering, quite smooth when ripe outside, and very similar to that of Torreya taxifolia. Seeds with a hard bony shell. Seed-leaves in twos.

A small bushy-headed tree, growing from twenty to forty feet high, with spreading more or less horizontal branches; found growing on the Sierra Nevada Mountains in California.

Timber yellowish, heavy, and fine-grained; but all parts of the tree emit a very disagreeable odour, when either bruised or burned, and is called by the Californian emigrants the Stinking Yew, or Californian Nutmeg.

It is quite hardy.

No. 2. TORREYA NUCIFERA, *Zuccarini*, the Nut-bearing Torreya.

Syn. Taxus nucifera, { *Thunberg*, not *Wallich*, and other Indian writers.
„ Caryotaxus nucifera, *Zuccarini*.
„ Podocarpus nucifera, *Persoon*.
„ „ Coreana, *Van Houtte*.

Leaves linear, rounded at the base, and somewhat two-rowed on the branchlets, but more or less distant, and scattered round the leading shoots, quite straight, flat, leathery, and tapering to rather a long, spiny acute point, mostly curved downwards; from one to one inch and three-quarters long, and one line and a half broad, on very short foot-stalks, of a deep glossy green, and convex on both sides of the mid-rib, which is a little sunk on the upper surface, and glaucous white below, except on the centre nerve and margins, which are of a deep glossy green, and rather elevated. Buds furnished with persistent, extended, acute-pointed scales. Branches numerous, either in whorls, alternate, or scattered along the stem, spread out, horizontal, and covered with scaly bark. Branchlets two-rowed, spreading, and rather short. Male catkins oval, or cylindrical; female flowers in pairs, or in threes in close heads on short peduncles. Fruit the size of a large nut, three-quarters of an inch long, and half an inch broad, oval, or ovate-oblong, largest at the base, slightly tapering to a small point at the apex, and covered with a firm, fleshy, thin, green tissue, very smooth, and glossy outside. Seed oval, with a hard bony shell. Seed-leaves in twos.

A small tree, growing from twenty to thirty feet high on the mountains on the Islands of Nippon and Sikok, in Japan, but cultivated all over Japan, where an oil is made from the kernels of the nuts, which is said to be used for culinary purposes, though the kernel itself is too astringent to be eaten, and all parts of the plant when bruised emit a disagreeable odour. Its Japanese names are Kaja-Ksa (strong-scented yew) and "Fi-Koja" (slender Yew) and, according to Kæmpfer, it is very frequent in the northern provinces of Japan, where it forms a tree twenty feet high, with many opposite scaly branches. Dr. Royle erroneously (as pointed out by Major Madden) extends its habitat to the Choor and Kedarkanta Mountains in Sirmore and Gurwhal, in India.

It is tolerably hardy.

No. 3. TORREYA TAXIFOLIA, *Arnott,* the Yew-leaved Torreya.
Syn. Taxus Montana, *Nuttall.*
„ Torreya Montana, *Hort.*

Leaves, on the stems and principal shoots, alternate, spreading, or reflected, and rather distant, those on the branchlets closely placed in two rows, nearly or quite opposite, rounded at the base, and somewhat recurved at the extremity, linear, frequently falcate, stiff, of a leathery texture, on very short foot-stalks, twisted, and decurrent at the base, and tapering to a long acute spiny point at the apex, somewhat lanceolate; from one to one inch and three-quarters long, and one line and a half broad, of a light green, glossy, and convex on the upper surface, but without any nerve along the middle, while the under one is slightly concave near the edges, pale glaucous gray, and marked on each side of the mid-rib with two reddish narrow sunken bands. Branches numerous, mostly in whorls, spreading, smooth, and two or three forked at each division. Branchlets somewhat two-rowed, and horizontal. Male catkins linear; female flowers without foot-stalks, and erect. Fruit, when ripe, oval, a little pointed, nearly as large as an ordinary walnut, with the external coat fleshy or rather leathery, and covering the whole surface of the seed, except a minute perforation at the top. Seed solitary, and when deprived of its succulent external covering, very much resembling a large acorn, with a beautiful ruminated albumen, resembling the inside of a nutmeg and covered with a hard bony shell. Seed-leaves in twos.

A handsome pyramidal-shaped evergreen tree, with numerous spreading branches, growing from forty to fifty feet high, and eighteen inches in diameter; found in the middle and Northern parts of Florida, growing abundantly about Aspalaga, on Calcarous Rocks, and along the banks of rivers near Flat Creek. The whole plant has a strong and particularly disagreeable smell, especially when bruised or burned, and is called by the Americans "Stinking Cedar," and by the people in the country where it grows, "wild nutmeg."

Timber dense, close-grained, heavy, and of a reddish colour. It is not quite hardy in some parts.

Gen. WELLINGTONIA. *Lindley.* The Mammoth Tree.

Flowers monœcious, or male and female, separate, but on the same plant.

Cones large, solitary, obtusely oval, and woody.

Scales placed at right angles upon the axis of the cone, wedge-shaped, persistent, and peltated.

Seeds from three to five under each scale, but mostly five.

Seed-leaves from three to six, but mostly in fours.

Leaves needle-shaped, spiral, and persistent, or scale-formed, and imbricated on adult trees.

Named in compliment to the late Duke of Wellington.

A gigantic tree from California.

The Genus Wellingtonia is considered by most systematic botanists as untenable, it not being sufficiently distinct from Professor Endlicher's Genus *Sequoia;* nevertheless, as the name has now been universally adopted in Garden Literature, it had much better be allowed to stand, as its alteration would cause great inconvenience and much confusion in practical Botany.

The seed-leaves (cotyledons) are from three to six in number, but mostly in fours in Wellingtonia, while those of the *Sequoia* are mostly in twos, but sometimes in threes.

The leaves on matured plants of Wellingtonia are also scale-formed, closely imbricated, and attached to the branch by a broad base; and when, as happens in the more vigorous shoots, the leaves acquire unusual development; they still are sessile, with a triangular section, and no tendency whatever to form a flat leaf; while the leaves of the Sequoia always acquire the form and expansion of a Taxus, and are two-rowed.

WELLINGTONIA GIGANTEA, *Lindley*, the Mammoth Tree.

Syn. Sequoia gigantea, *Endlicher.*
„ „ Wellingtonia, *Seemann.*
„ Washingtonia gigantea, *of the Americans.*
„ „ Californica, *Winslow.*
„ Americanus giganteus, *Hort. Amer.*
„ Taxodii, sp., *Douglas.*
„ Taxodium Washingtonianum, *Winslow.*

Leaves needle-shaped, spirally alternate, spreading, persistent, and of a light green colour on the young plants; those on the adult trees scale-formed, closely inlaid, rounded on the back, and concave on the inner face; those on the branchlets much shorter, very close, and regularly imbricated; those on the larger branches longer, looser, decurrent at the base, and tapering to an acute point, but sometimes rather obtuse. Branches spread out horizontal, much divided, and furnished with numerous laterals. Branchlets cylindrical, frequently pendulous, and thickly covered with light-green glaucous foliage, cone-bearing ones slightly thickened, and entirely covered with scale-formed leaves closely imbricated, the upper ones oval, and broadest at the base. Cones solitary on the ends of the branchlets, two inches long, and more than one inch in diameter, ovate, blunt-ended, and slightly tapering towards both extremities. Scales in series, placed nearly at right angles upon the axis of the cone, stipitate, thickened, and enlarged from the point of insertion as far as the summit, which is depressed and wrinkled on the external face, and furnished with a small prickle in the centre of the little hollow. Seeds from three to five under each scale, but mostly five. Seed-leaves from three to six in number, but mostly in fours.

This magnificent evergreen tree was first discovered by Douglas in 1831, and on account of its extraordinary height and dimensions, is called by the American settlers in California the "Mammoth Tree;" and, according to Mr. G. L. Trask, who formerly exhibited a portion of the bark set up in the Crystal

Palace, to show the great size this tree attains in its native state, gives the following as the dimensions of one of the largest of eighty trees, growing in a grove at San Antonio, viz.:—height, 363 feet; circumference near the ground, 93 feet; circumference 100 feet from the ground, 45 feet; bark, 18 inches thick; age according to annual rings, from 3000 to 4000 years.

It is found growing on the slopes of the Sierra Nevada, near the sources of the Stanislaus and San Antonio, in Upper California, in sheltered valleys, at an elevation of about 5000 feet. It is quite hardy and grows rapidly.

WELLINGTONIA GIGANTEA VARIEGATA, *Hort.*, the Variegated Wellingtonia.

A very striking variety, with about one-fourth of the branchlets of a delicate straw colour.

Gen. WIDDRINGTONIA. *Endlicher.* The African Cypress.

Flowers diœcious, or male and female on separate plants, and terminal; the male catkins oblong or cylindrical; the female ones globular, and without foot-stalks.

Cones globular, either solitary or two or three together, and composed of four valves or scales.

Scales, or *valves*, four in number, oval, mucronate, somewhat in whorls round a depressed axis, with the edges converging.

Seeds frequently few from abortion, but with from five to ten ovules at the base of each scale, in one or two series, and covered with a somewhat crustaceous tegument, spreading on each side into a membranaceous wing.

Seed-leaves in twos.

Leaves thickly set, alternately or in whorls, linear or needle-shaped, spreading, but sometimes very small, scale-formed, and approaching imbricate, with a gland on the back.

Named in compliment to Captain Widdrington (formerly Cook), who travelled in Spain.

All evergreen bushes or small trees, found at the Cape of Good Hope and Madagascar.

No. 1. WIDDRINGTONIA COMMERSONII, *Endlicher.*

Syn. Thuja quadrangularis, *Ventenat.*
„ Pachylepis Commersonii, *Brongniart.*

Leaves very short, acute, and distant on the branches, obtuse, closely set together, and disposed in four rows on the branchlets. Branches numerous, spread out, and close together along the stem. Branchlets slender, numerous, and rather pendent. Cones globular, almost the size of a walnut, and quite smooth. Valves very thick, without any points, but rounded in the centre, slightly swelling towards the summit on the outer side, keeled on the inner one, and huddled together at the points.

A species of which little is known beyond its being found in Madagascar, and was formerly in the Botanic Garden of the Mauritius, but not yet introduced into England, and, no doubt, very tender.

No. 2. WIDDRINGTONIA CUPRESSOIDES, *Endlicher.*

Syn. Thuja cupressoides, *Linnæus.*
„ „ aphylla, *Burmann.*
„ Callitris Capensis, *Schrader.*
„ „ stricta, *Schrader.*
„ „ cupressoides, *Schrader.*
„ Pachylepis cupressoides, *Brongniart.*
„ Widdringtonia glauca, *Carrière.*

Leaves on the branches, acute, somewhat spreading at the points; those on the branchlets, four-rowed, much shorter, and imbricated. Branches elongated, erect, and pyramidal. Branchlets slender, bent downwards, or pendent at the ends, and covered with leaves. Cones ovate-obtuse, from nine to ten lines long, and much larger than those of Widdringtonia juniperoides. Valves woody, slightly convex, pointed, erect, huddled together at the points, terminated by a little conical point, sharply keeled on the inner face, and enclosing two seeds.

A bush, from four to ten feet high, found in the southern parts of the Cape of Good Hope, at elevations of from 1000 to 3000 feet, and called Saprehout by the Dutch settlers.

It is quite tender.

No. 3. WIDDRINGTONIA JUNIPEROIDES, *Endlicher*.

Syn. Cupressus juniperoides, *Linnæus*.
„ „ Africana, *Miller*.
„ Juniperus Capensis, *Lamarck*.
„ Taxodium juniperoides, *Hort*.
„ „ Capense, *Hort*.
„ Schubertia Capensis, *Schrader*.
„ Pachylepis juniperoides, *Brongniart*.
„ Callitris arborea, *Schrader*.
„ Parolinia juniperoides, *Endlicher*.

Leaves without any foot-stalks, but adhering at the base, and running down the stem, leathery, and glaucous-green, the younger ones mostly linear, or needle-shaped, smooth, sharp-pointed, and slightly three-nerved, spreading, slightly curved, opposite, or in whorls of three, and from three-quarters to an inch long, and three-quarters of a line broad at the base; the adult ones are scattered; those on the branchlets are sometimes ovate-lanceolate, or rhomboid-obtuse, or sharp-pointed, terminating in a small bristle-point, or erect and loosely imbricated, with a slightly sunken gland on the back. Branches spreading, and pointing upwards at the ends. Branchlets erect, or sometimes spreading, angular, frequently very short, and covered with needle-shaped leaves. Male flowers oblong-cylindrical and terminal. Cones on the laterals, in clusters of three or four together, rounded, and slightly depressed. Valves oval, woody, reddish brown, shining, and closing upwards to the top, level on the interior face, and with two seeds under each.

A middle-sized tree, with a straight stem, and ample head, found in the western parts of the Cape of Good Hope, on the Mountains of Blauwberg, at an elevation of from 3000 to 4000 feet, and plentiful on Cedernberg (Cedar Mount). It is the Cedar-boom of the Dutch settlers.

It is quite tender.

No. 4. WIDDRINGTONIA NATALENSIS, *Endlicher.*

This kind is said to resemble Widdringtonia cupressoides, but with numerous more slender branchlets, and with the leaves all acute, having a gland upon the back, and with the female flowers in twins, in loose terminal spikes.

A kind of which little further is known beyond its being found at Port Natal in South Africa.

It is not yet introduced, and certainly tender.

No. 5. WIDDRINGTONIA WALLICHII, *Endlicher.*

This species is closely related to Widdringtonia cupressoides, but certainly different, according to Sir Wm. Hooker in his Journal of Botany.

It forms a middle-sized tree, with a stem from 15 to 18 inches in diameter, and was first discovered by Dr. Wallich, in the environs of the Cape of Good Hope, but has not yet been introduced into England.

ADDENDA.

ABIES CANADENSIS ALBA SPICA, *Barron*, the Variegated Hemlock Spruce.

This variety differs from the ordinary form, in having the leaves on the ends of the young growth of a whitish colour.

A rather pretty variety.

ABIES CANADENSIS MILFORDENSIS, *Young*, the Milford Dwarf Hemlock Spruce.

This is a dwarf variety, globular in form, with the shoots slender and drooping, and the leaves much smaller than those of the common Hemlock Spruce. It is quite distinct from the Canadensis gracilis, and originated in the nursery of Mr. Maurice Young, at Milford, in Surrey.

The Abies Hanburyana, in some collections, is the same as Abies Tsuga, and in others as the Abies Pattoniana, of which there are two forms, one with the leaves much more glaucous than the other, and it is to the least glaucous form of Abies Pattoniana, that the name Hanburyana is applied; both forms are in the nurseries of Messrs. Veitch and Mr. Barron.

ARAUCARIA EXCELSA, SPECIOSISSIMA, *Hort.-Paris*, the very showy Norfolk Island Pine.

This variety of the Norfolk Island Pine, according to the

Revue Horticole, is one of the prettiest kinds produced, and is remarkable for its hardiness, as well as for its appearance, which somewhat resembles the Araucaria Cunninghamii, but is of larger size. The distinguishing characteristic of this variety, independent of its appearance and hardiness, is the length of the leaves, which are very large and curved, or curled up, and reach a length of four centimetres, and then terminate in a sharp point. This curling up of the leaves gives the boughs exactly the appearance of the Araucaria Cunninghamii, and appears to be an intermediate link between the two kinds. It is in the establishment of Mr. Rougier-Chanvier, near Paris.

BIOTA ORIENTALIS ASCOTENSIS, *Hort.*, the Variegated Ascot Arbor Vitæ.

This is a very nice variegated variety, with slender, upright branchlets, a good portion of which are of a bright golden colour.

BIOTA ORIENTALIS MACROCARPA, *Hort.*, the Large-fruited Arbor-Vitæ.

Syn. Biota Macrocarpa, *Hort.*
„ „ Japonica laxa, *J. Scott.*

This is a dwarf, loose-growing variety of the Japonica type, with slender, drooping branches, and rather distant, alternate, flattened branchlets, regularly furnished laterally with small, bright-green spray.

It is a nice slender kind.

BIOTA ORIENTALIS SEMPER-AURESCENS, *Lemoine*, the Ever Golden-Tinted Arbor Vitæ.

This variety has a dwarf, dense, conical habit of growth, very similar to that of the Biota Orientalis aurea, but differs from it in retaining its golden hue throughout the year. It is a very desirable variety, originally obtained from France.

BIOTA ORIENTALIS ZUCCARINIANA, *Hort.*, the Dwarf Green Japan Arbor Vitæ.

This is a neat, compact, dwarf variety, globular in form, and of a fine bright green colour, which it retains well through the winter.

A nice dwarf variety, from Japan, which is said to come true from seed.

CEDRUS DEODARA ALBA SPICA, *Hort.*, the White Variegated Deodar Cedar.

Syn. Cedrus Deodara variegata, *Hort.*

This is a variegated form, with some of the leaves on the side spurs and leading shoots of a whitish colour.

It is not a very attractive variety.

CHAMÆCYPARIS SPHÆROIDEA AUREA, *Hort.*, the Golden Variegated White Cedar.

This variety differs from the old variegated one in having a good part of the lesser branchlets of a rich golden colour.

It is a continental production, and particularly attractive in the spring.

CRYPTOMERIA JAPONICA SPIRALIS, *Hort.*, the Spiral-leaved Japan Cedar.

This is a very singular variety, with the leaves closely arranged, more or less spirally all round the branchlets, or with some of them closely incurved and twisted in the lower parts, and abruptly extended horizontally at the points and pungent.

It is a slender-growing kind, with cord-like branchlets of a bright green colour.

CRYPTOMERIA JAPONICA VERA, *Siebold.*

This is considered to be the original form of the Japan Cedar, found in the north of Japan. It differs from the one originally introduced from the north of China by Mr. Fortune, in its more compact habit of growth, much stiffer and erecter branches, and in its not turning near so brown in the winter.

It has recently been introduced by Mr. Young, of Milford.

CUPRESSUS GOVENIANA GLAUCESCENS, *Hort.*, the Glaucescent Gowen's Cypress.

This remarkable variety was raised by M. Sahut, of Montpelier, and is distinguished from the original bright-green form of the species by its more robust habit and grosser branchlets, and by the characteristic glaucescence of all parts of the plant, which has a hoary-blue tint very rare in cypresses.

It is in the nursery of Mr. Smith, at Worcester.

CUPRESSUS LAWSONIANA ALBA SPICA (Young's Variety).

This is a fine free-growing variety, of a bright green colour, with the lesser spray thickly speckled all over with white leaves, which have the appearance of countless white specks, and which renders the plant very attractive during the spring and summer months.

It was raised in Mr. Young's nursery, at Milford, and is a very different kind from the one generally known under the name of alba spica.

CUPRESSUS LAWSONIANA ALBA SPICA NANA, *Hort.*, the Dwarf Silvery White Lawson's Cypress.

Syn. Cupressus Lawsoniana alba nana, *Hort.*

This is a dwarf, compact-growing variety, with the points of the young wood of a beautiful silvery white colour.

A very elegant and distinct variety, of continental origin.

CUPRESSUS LAWSONIANA CŒRULEA, *Hort.*, the Blue Lawson's Cypress.

This is a fine, compact, close growing variety, with the foliage of a bluish-green colour, shaded with gray. It is a distinct, continental production, which always retains the blue tint.

CUPRESSUS LAWSONIANA ELEGANTISSIMA, *Barron*, the Very Elegant Lawson's Cypress.

This is a remarkable fine variety, raised by Mr. Barron, of the Elvaston Nursery, which has not only the young leaves, but the young wood of a beautiful canary colour, and which colour is not impaired, either by the sun's rays in summer, or the frost in winter.

It is a very desirable kind, on account of the fine canary colour, which is diffused all over the branchlets.

CUPRESSUS LAWSONIANA ERECTA VIRIDIS, *A. Waterer*, the Bright-Green Erect Lawson's Cypress.

This is a very fine and distinct kind with a dense, compact, fastigiate head, and very close, erect, slender branchlets of a beautiful bright-green colour. It was raised in the Nursery of Mr. Anthony Waterer, at Knaphill, Surrey, and is very superior to either the Upright Cypress, Irish Yew, or Swedish Juniper, for planting singly on terraces or in formal Flower Gardens, on account of its upright and very compact habit, and fine bright green colour.

This variety of Lawson's Cypress must not be confounded with the one known under the names of *erecta* and *viridis* (*see p.* 87), as it is more upright and compact in its habit, and of a more beautiful green tint.

CUPRESSUS NUTKAENSIS AUREA VARIEGATA, *M. Young*, the Golden Variegated Nootka Sound Cypress.

Syn. Thuiopsis Borealis aurea variegata, *Hort.*

This is a fine and constant variegated form, with a good portion of the lesser branchlets of a light bronzy-yellow colour, which becomes much brighter in the summer.

It originated in the nursery of Mr. Maurice Young, at Milford, in a leading shoot on the common form of the species.

CUPRESSUS NUTKAENSIS COMPACTA, *Hort.*, the Compact Nootka Sound Cypress.

Syn. Thuiopsis Borealis compacta, *Hort.*

This is a Belgian variety, somewhat pyramidal in shape, with the branches and branchlets more compact, slenderer, and of a brighter green than the species.

It is tolerably distinct, and forms a close, bushy head, without a leading shoot.

CUPRESSUS NUTKAENSIS GLAUCA, *Hort.*, the Glaucous Nootka Sound Cypress.

This variety only differs from the ordinary form of the species in its glaucous colour.

JUNIPERUS CHINENSIS AUREA, *Young's Variety*, Mr. Young's Golden Chinese Juniper.

This is a very beautiful and constant variety of the male form of the plant, with all the more prominent portions and exposed parts suffused with a rich golden colour. It is not what is strictly called variegated, but self-coloured, and retains its rich tint through the winter as well as the summer, and is one of the very finest golden conifers at present in cultivation.

It originated in a sport, of the male form, of the Chinese Juniper, in the nursery of Mr. Maurice Young, at Milford, in Surrey.

JUNIPERUS CHINENSIS LEEANA, *Hort.*, Lee's Chinese Juniper.
Syn. Juniperus Leeana, *Hort.*

This is an upright and densely-branched variety, of the male form, which has the leaves mostly open, all over the plant, and about half an inch long.

It was raised in the Hammersmith nursery.

The JUNIPERUS SHEPPARDII, *Hort.*, is the same as Juniperus sphærica glauca, Fortune, and the Juniperus venusta, of some collections, is the same as Juniperus Occidentalis, Hooker.

LIBOCEDRUS DECURREUS DEPRESSA, *J. Scott*, the Depressed Libocedrus.

This is a distinct dwarf variety, very dense, compact, and globular in form, and which grows as wide as it does high.

It originated in Mr. Scott's nursery, at Merriott, in Somersetshire, and where the original plant, after being planted ten years, has formed a globular head not more than three feet in diameter, and the same in height.

PICEA PINSAPO GLAUCA, *Hort*, the Glaucous Pinsapo Fir.

This is a very handsome variety, with the leaves, equal in length and thickly placed at right angles round the shoots. The leaves are very rigid, half an inch long, blunt-pointed, somewhat rounded, and quite glaucous on the upper surface, and with two conspicuous glaucous white bands beneath, separated by the mid-rib, which is, as well as the margins, of a bright-green colour.

It is a very fine variety on account of its silvery appearance, and is in the nurseries of Mr. Smith, of Worcester, and Mr. Scott, at Merriott, in Somersetshire.

PINUS STROBUS COMPACTA, *Hort.*, the Compact or Bushy Weymouth Pine.

This variety forms a dense, compact, round-headed bush, from four to six feet high, and is very distinct from the *Strobus nana*, with which it is sometimes confounded in the Nurseries.

RETINOSPORA FILIFERA GRACILIS, *Hort.*, the Slender, Thread-branched Japan Cypress.

This variety differs from the original form, in being much slenderer in all its parts, and of a much brighter green colour. It produces numerous long, slender, drooping shoots, which are frequently from five to six inches in length, before they produce any branchlets, and the branchlets, which are mostly produced in tufts near the ends of the branches, have quite a tasselled appearance.

RETINOSPORA OBTUSA ALBA SPICA, *Barron*, the White Speckled, Obtuse-leaved Japan Cypress.

This variety is similar in general character to the ordinary form of the species, but rather more compact in habit. The young shoots are pure white when first they appear in the spring, and remain so for about three months, when they gradually change, and finally become green.

A nice, distinct variety.

RETINOSPORA OBTUSA GRACILIS AUREA, *Veitch,* the Slender Golden Japan Cypress.

This is a fine free-growing kind, very similar in habit to the ordinary form of the species, but with the lower parts of the lateral branchlets and lesser spray on the upper surface of the branches of a light yellow colour, and the tips bright green.

It is a very striking variety, particularly in the spring and summer-time, and was raised in the nursery of Messrs. Veitch and Sons, at Coombe Wood, in Surrey.

RETINOSPORA OBTUSA NANA AUREA, *Veitch,* the Dwarf Golden Japan Cypress.

This kind forms a dwarf dense bush, with numerous small, spreading, thickly-placed, flat variegated branchlets. It is one of the finest and most constant of the light-yellow variegated varieties, and was introduced from Japan by the late Mr. John Gould Veitch.

RETINOSPORA PISIFERA ERECTA, *Hort.,* the Erect, Pea-fruited Japan Cypress.

Syn. Retinospora stricta, *Hort.*

This is a compact, free-growing variety, of upright habit, and foliage of a pale green colour.

A nice, distinct variety.

RETINOSPORA PISIFERA GRACILIS, *Hort.,* the Slender, Pea-fruited Japan Cypress.

This variety very much resembles the ordinary form of the species, but differs in having the branchlets and smaller spray much slenderer, and of a brighter green colour.

RETINOSPORA PISIFERA NANA AUREA, *Hort.,* the Dwarf Golden, Pea-fruited Japan Cypress.

This kind forms a dense, little, miniature bush, with a bluish-grey aspect, and a portion of the lesser branchlets of a pale yellow colour. It is a singular little plant, of slow growth, with the green branchlets on the under side quite glaucous.

RETINOSPORA PLUMOSA ALBA VARIEGATA, *Hort.*, the White Variegated Plume Japan Cypress.

This is a charming variety, with bluish-gray foliage, distinctly and beautifully variegated with clear white spots, which gives the plant the appearance of being covered with small snow-flakes throughout the year.

RETINOSPORA PLUMOSA AUREA PUMILA, *Hort.*, the Little Golden Plume Japan Cypress.

This is a very neat, dwarf variety, which differs principally from the plumosa aurea, in being very much dwarfer and smaller in all its parts.

It is an elegant little plant, with all the ends of the young growth of a beautiful golden colour, during the spring and summer months.

RETINOSPORA PLUMOSA FLAVESCENS, *Cripps*, the Yellowish Plume Japan Cypress.

This is a nice pale form of the plumosa aurea, with the ends of the young shoots of a greenish-yellow colour.

RETINOSPORA TETRAGONA, *Barron*, the Square-branchletted Japan Cypress.

Syn. Chamæcyparis thujæformis, *R. Smith.*

This kind forms a dwarf, compact, slow-growing shrub, of a remarkably bright-green colour; the secondary branchlets and small spray are short, crowded, four-sided, and of a very bright green; the leaves are ovate, a little pointed, closely and regularly imbricated, in four rows, and of a beautiful bright glossy green colour.

A very distinct kind, recently obtained from Japan by Mr. Barron, of the Elvaston Nursery, and Mr. R. Smith, of Worcester, and of which Mr. Barron has a nice variegated form, with a portion of the lesser branchlets of a rich golden colour.

SEQUOIA SEMPERVIRENS LAWSONIANA, *Hort.*, Lawson's Californian Redwood.

This is a distinct variety, with much shorter and stouter leaves, and a more rigid habit of growth than the original species.

It originated in Messrs. Lawson's nursery, at Edinburgh.

TAXUS BACCATA ELVASTONENSIS, *Barron*, the Golden Elvaston Yew.

This is a distinct variety, with the leaves on the younger parts of the plant of a bright orange colour. It is not a variegated form, but a self-coloured one, and by far the most brilliant of any of the golden varieties in the winter time. It originated at Elvaston Castle, in Derbyshire.

TAXUS BACCATA VARIEGATA BARRONI, *Barron*, Mr. Barron's Variegated Yew.

This is a female variety, raised at Elvaston Castle from a seed of the old golden yew. It is very symmetrical in habit, forming a perfect pyramid, and is of much freer growth and brighter in colour than the parent plant, and, being a fruit-bearing variety, is very desirable.

TAXUS CANADENSIS VARIEGATA, *Hort.*, the Variegated Canadian Yew.

This variety has all the leaves at the ends of the young shoots, of a whitish colour, and those lower down more or less margined with white; but when the leaves are fully matured, they assume the usual dull green of the species.

THUJA GIGANTEA ATROVIRENS, *Hort.*, the Dark Green Giant Arbor-Vitæ.

Syn. Thuja Lobbii atrovirens, *R. Smith.*

This is a fine robust variety, of a very dark, glossy, green colour, with spreading branches, and open, broad, flat, branchlets.

A fine distinct variety.

THUJA GIGANTEA PUMILA, *Hort.*, the Smaller Giant Arbor-Vitæ.

Syn. Thuja Lobbii pumila, *R. Smith.*
„ „ „ diffusa, *R. Smith.*

This variety is more diffuse in its habit than the species, and much smaller in all its parts; the branchlets also are much closer set along the branches, and of a brighter green.

A nice distinct variety.

THUJA OCCIDENTALIS ALBA, *Maxwell,* the Queen Victoria, American Arbor-Vitæ.

This is a pretty variety, with the tips of the young branchlets of a silvery-white colour in the spring and early part of summer.

It is an American production.

THUJA OCCIDENTALIS AUREA, *Maxwell,* the George Peabody, American Arbor-Vitæ.

This is a very nice, bright, golden, self-coloured variety, recently introduced from the nursery of Messrs. Maxwell of Geneva, New York.

THUJA OCCIDENTALIS GRACILIS, *Jno. Scott.*

This is a tall, loose-growing variety, with long, slender branches, which droop regularly on all sides, the branchlets are open, rather thinly placed, and furnished with longish, slender bright-green laterals.

A nice distinct kind which originated in Mr. Scott's nursery, at Merriott.

The THUJA PLICATA PENDULA of the nurseries, is the same as Thuja Occidentalis pendula.

ERRATA.

Page 4 *for* Alcocsciana, *read* Alcoquiana.
,, 11 and 27 *for* Jessoensis, *read* Jezoensis.
,, 15 line 5 from the top, *for* beak, *read* back.
,, 18 ,, 9 ,, ,, *for* cærul*i*a, *read* cærul*e*a.
,, 103 ,, 13 ,, ,, *for* Arthrotax*u*s, *read* Arthrotax*i*s.
,, 113 ,, 18 ,, ,, *for* dusky, *read* wide.
,, 137 top line for oblonga*ta*, *read* oblonga.
,, 183 line 24 from the top, *for* adpressed, *read* placed.

SYSTEMATIC INDEX.

GENERA *are indicated by Capitals,* SPECIES *by small* Roman type, SYNONYMS *by Italics. The names appended either to Genera or Species denote the authorities for them; and where the word* Hort. *occurs as an authority, it signifies that the name is one conventionally adopted by Horticulturists.*

PAGE
ABIES, *Linnæus* 1
Ajanensis, Lindley 18
alba, Miller 209
alba, *Michaux* 3
„ *argentea*, Hort. 4
„ *echinoformis*, Hort. .. 4
„ glauca, *Plumbly*...... 4
„ minima, *Knight* 4
„ nana, *Loudon* 4
„ *prostrata*, Hort. 4
Albertiana, Murray......... 29
Alcoquiana, *Veitch* 4
amabilis, Lindley 213
Apollinis, Link. 197
Araragi, Loudon............ 32
Araucana, Poiret 39
Arctica, Cunningham...... 17
argentea, De Chambr—... 209
Atlantica, Lindley 60
Baborensis, Cosson 220
balsamea, Miller 200
„ *Fraseri*, Spach. 205
„ *longifolia*, Endlicher............ 201
„ *prostrata*, Knight 206
„ *variegata*, Hort. 201
balsamifera, Michaux ... 200
bifida, Siebold 204
brachyphylla, Maximo ... 201
bracteata, Hooker 202
Bridgesii, Kellogg 29
Brunoniana, *Lindley* 21
Californica, Don............ 24
Canadensis, *Michaux* 22
„ abla spica, *Barron*...... 421
„ gracilis, *Waterer* 23
„ *microphylla*, Hort. 23
„ Milfordensis, *Young* 421
„ nana, *Knight* 23

PAGE
ABIES.
Canadensis, *taxifolia*, Gordon 29
candicans, Fischer 208
Carpatica, Hort. 6
cedroides, Griffith 21
Cedrus, Poiret 65
Cephalonica, Loudon 203
„ *Arcadica*, Henk .. 197
„ *Parnassica*, Henk 197
Chilrowensis, Hort.......... 226
Cilicica, Carrière 214
Clanbrasiliana, Loudon... 7
cœrulea, Loddiges 18
Columbaria, Desfont 39
communis, Hort. 6
„ *pendula*, Booth. 10
commutata, *Parlatore* ... 5
concolor, Lindley 216
curvifolia, Booth............ 3
Dammara, Poiret 111
decidua, Wallich 21
densa, Griffith 226
denticulata, Poiret 13
Deodara, Lindley 61
diversifolia, Hort. 32
Douglasii, *Lindley* 24
„ *brevibracteata*, Antoine...... 25
„ fastigiata, *Knight* 25
„ *Mexicana*, Hartweg 25
„ pendula, *Parlatore* 27
„ Stairii, *Hort.*... 27
„ Standishiana, *Gordon* 26
„ taxifolia, *Loudon* 25
Drummondii, Hort. 25
dumosa, Loudon 21
elegans, Smith 8
Engelmannii, Parry 5

PAGE
ABIES.
excels *D.C.* 6
„ *attenuata*, Hort.... 11
„ brevifolia, *Cripps.* 8
„ Clanbrasiliana, *Loudon* 7
„ *conica*, Keteleer ... 11
„ *Cranstoni*, Hort. .. 10
„ denudata, *Hort.* ... 8
„ *dumosa*, Hort. ... 8
„ elegans, *Loudon*... 8
„ eremita, *Knight* ... 8
„ Finedonensis, *Paul* 9
„ *foliis variegatis*, Loudon 11
„ *gigantea*, Hort. ... 10
„ Gregoryana, *Paul* . 9
„ *horizontalis*, Hort. 10
„ inverta, *R. Smith* . 9
„ monstrosa, *Loudon* 10
„ mucronata, *Loudon* 10
„ nigra, *Loudon*...... 10
„ pendula, *Loudon*.. 10
„ pygmæa, *Loudon* . 7
„ pyramidalis, *Hort.* 10
„ stricta, *Loudon* ... 11
„ tenuifolia, *Loudon* 11
„ *virgata*, Jacques .. 8
„ variegata, *Loudon.* 11
Finedonensis, Hort. 9
firma, Siebold 204
Fischerii, Ledebour......... 172
Fortunei, *Lindley* 27
Fraseri, Lindley 205
„ *glauca*, Wm. Paul ... 206
„ *nana*, Hort. 206
gigantea, Smith 10
glauca, Roezl 213
glauca, Mœnch 3
glaucescens, Roezl 213
Gmelini, Ruprecht 168
Gordoniana, Carrière 217
gracilis, Hort. 30
„ *microphylla*, Hort. . 11
grandis, Lindley 217
Gregoryana, Low 9
Gregoryi, Hort.............. 9
Griffithiana, Lindley 171
Hanburyana, Hort. ... 32, 421
heterophylla, Rafinesque .. 29
hirtella, Lindley 212
Hispanica, De Chambr— 224
holophylla, Maximo 206

PAGE
ABIES.
homolepis, Siebold 204
Hookeriana, Murray 30
Hudsonia, Bosc. 206
inverta, R. Smith............ 9
Jezoensis, *Siebold* 11
Jezoensis, Lindley 27
Kœmpferi, Lindley......... 360
Kamtschatica, Ruprecht . 172
Khutrow, Loudon 19
lasiocarpa, Lindley 213
lanceolata, Desfont......... 77
Larix, Lamarck 169
Ledebourii, Ruprecht 173
leioclada, Steven 208
Lemoniana, Booth 10
Luscombeana, Loudon ... 203
Mariana, Miller 13
Maximowiçzii, *Newmann* . 33
Menziesii, *Loudon* 12
„ crispa, *Antoine* 13
Mertensiana, *Lindley*...... 29
Metensis, Hort. *Paris*...... 211
microcarpa, Lindley 175
microphylla, Hort. 11
microsperma, Lindley...... 11
miniata, Knight 8
minima, Hort. 7
minor, Duhamel 200
minuta, Hort. 7
Momi, Siebold.............. 204
Morinda, Hort............... 19
mucronata, Rauch 10
mucronata, Rafinesque ... 24
„ *palustris*, Rafinesque...... 25
nana, Hort. 7
nigra, Engelmann 5
nigra, *Michaux* 13
„ *var. rubra*, Michaux 17
„ *fastigiata*, Hort. ... 14
„ pumila, *Knight* 14
nobilis, Lindley 207
„ *robusta*, Carrière . 219
nodosa, Japanese............ 173
Nordmanniana, Link. ... 208
Numidica, De Lannoy ... 220
obliquata, Rafinesque 24
obovata, *Loudon* 14
Orientalis, *Poiret*............ 15
Panachaica, Heldreich ... 197
Pattoniana, *Jeffrey* ... 30, 421
pectinata, D. C. 209

PAGE
ABIES.
pectinata Apollinis, Endlicher............ 197
„ *leioclada*, Link. 208
„ *prostrata*, Hort. 211
„ *pyramidalis*, Carrière......... 210
„ *stricta*, Carrière 211
Peloponnesiaca, German Gardens..................... 197
pendula, Lindley........... 177
pendula, Griffith 19
Picea, Miller 6
„ Lindley 209
„ *leioclada*, Lindley . 208
Pichta, Fischer 221
„ *alba*, Hort. 214
„ *Fischeri*, Loudon .. 214
Pindrow, Spach 222
Pinsapo, Boissier........... 224
„ *Baborensis*, Carrière 220
„ *variegata*, Carrière 225
polita, *Siebold* 16
pumila, Hort. 7
pyramidalis, Hort. 10
„ *Metensis*, Carrière 211
Reginæ Amaliæ, Heldreich 197
Rinzi, Hort. 214
religiosa, Lindley 212
rubra, *Poiret*.................. 17
„ *Artica*, Hort. 17
„ *Californica*, Hort. . 17
„ cœrulea, *Loudon* ... 18
„ *violacea*, Loudon ... 18
rugosa, Hort. 6
Schrenkiana, *Lindley*...... 18
Sibirica, Ledebour 221
Sibirica, Fischer 172
„ *alba*, Fischer ... 214
Sitchensis, Lindley 12
Smithiana, *Loudon* 19
spectabilis, Spach............ 226
spinulosa, Griffith 19
Sumatrana, Desfont 111
taxifolia, Drummond...... 25
taxifolia, Jeffrey 29
taxifolia, Desfont 209
Tchugatskoi, Lawson 214
Thunbergii, Lambert 16
Tlapalcatuda, Roezl 213
Torano, Siebold 16

PAGE
ABIES.
Tsuga, *Siebold* 32, 421
„ nana, *Siebold* 33
Veitchii, Lindley 226
viminalis, Alstræmer 10
vulgaris, Poiret 209
Webbiana, Lindley 226
„ *affinis*, Hort. ... 222
Williamsonii, Newberry. 30
Wittmanniana, Hartwess . 15
ACTINOSTROBUS, *Miquel*... 33
„ acuminata, *Parlatore* 34
„ pyramidalis, *Miquel.* 34
Agathis Australis, Salisbury . 108
„ *Dammara*, Richard 111
„ *loranthifolia*, Salisbury 111
Alania sp. Colenso 104
Altingia Cunninghami, Don... 44
„ *excelsa*, Loudon 45
Americanus giganteus, *H. Am.* 415
ARAUCARIA, *Jussieu*......... 35
Bidwilli, *Hooker* 36
Brasiliensis, *Richard* 37
„ gracilis, *Carriere* . 38
„ Ridolfiana, *Savi*... 38
„ Saviana, *Parlatore* 39
Chilensis, Mirbel........... 33
columnaris, Hooker 49
Cookii, *R. Brown* 43
Cunninghamii, *Aiton* 44
„ glauca, *Aiton* 45
„ longifolia, *Antoine* 45
Dombeyi, Richard 39
elegans, Knight 38
excelsa, *R. Brown* 45
„ speciosissima, *Hort. Paris* 421
„ variegata, *Hort.* ... 46
glauca, Loddiges 45
gracilis, Van Houtte 38
imbricata, *Pavon*............ 39
„ variegata, *Hort.* 42
intermedia, Vieillard 43
lanceolata, Hort. 77
Lindleyana, Van Houtte . 38
Ribbiana, Italian Gardens 38
Ridolfi, Hort. 38
Rulei, *Mueller* 42
Saviana, Parlatore 39
subulata, Vieillard 43
ARBOR VITÆ, *see* THUJA.
Arceuthos drupacea, Antoine .. 133
ARTHROTAXIS, *Don*......... 46

PAGE
ARTHROTAXIS.
Alpina, Van Houtte 48
araucarioides, Brongniart 103
cupressoides, *Don* 47
Doniana, Maule 48
Donniana, Parker 48
Gunniana, *Hooker* 47
imbricata, Maule............ 47
laxifolia, *Hooker* 48
selaginoides, *Don* 48
tetragona, Hooker 184
Belis jaculifolia, Salisbury ... 77
„ *lanceolata*, Sweet 77
BIOTA, *Don* 49
Coræana, Siebold 53
excelsa, Hort. 55
Fortunei, Hort. 54
freneloides, Belgian Gardens 52
funiculata, Hort............. 52
gracilifolia, Knight 52
Japonica, Siebold 53
Japonica laxa, Scott 422
macrocarpa, *Hort.* 422
Meldensis, *Lawson* 57
Nepalensis, Endlicher ... 52
Orientalis, *Don* 50
„ argentea, *Hort.* 51
„ arthrotaxoides, *Hort.* 51
„ Ascotensis, *Hort.* 422
„ aurea, *Hort.* ... 50
„ „ *nana*, Hort. 51
„ *compacta*, Hort. 53
„ elegantissima, *Rollisson* 53
„ *excelsa*, Hort. ... 55
„ falcata, *Lindley.* 54
„ funiculata, *Hort.* 52
„ glauca, *Pince* ... 52
„ gracilis, *Carriere* 52
„ *incurvata*, Knight 53
„ macrocarpa, *Hort.* 422
„ monstrosa, *Carriere* 52
„ *nana*, Carrière .. 53
„ Pekinensis, *Gordon*.............. 54
„ *pendula*, Parlatore 55
„ pyramidalis, *Endlicher* 55
„ semper-aurescens, *Lemoine*......... 422

PAGE
BIOTA.
Orientalis Sieboldii, *Endlicher* 53
„ *stricta*, Loudon. 55
„ *Tatarica*, Endlicher 409
„ triangularis, *Hort.* 55
„ variegata, *Endlicher* ... 51
„ „ *aurea*, Carrière 51
pendula, *Endlicher* 55
prostrata, Hort. 401
pyramidalis, Carrière...... 409
„ *pumila*, Carrière... 50
Tatarica, Loudon 409
„ *Wareana*, Hort.... 409
Wareana, Hort. 409
Zuccariniana, *Hort.* 422
CALLITRIS, *Ventenat* 57
arborea, Schrader 418
arenosa, Sweet............... 117
articulata, Pinet-Woburn. 117
Australis, Hooker 117
calcarata, R. Brown 117
Capensis, Schrader 417
cupressiformis, Ventenat . 117
cupressoides, Schrader ... 417
Fothergilli, Loudon 119
fruticosa, R. Brown......... 119
glauca, R. Brown ... 120—123
Gunnii, Hooker 120
Hugelii, Knight 121
macrostachya, Hort. 120
oblonga, Richard............ 120
Preissii, Miquel 123
propinqua, R. Brown 123
pyramidalis, Sweet 123
quadrivalvis, *Ventenat* ... 58
rhomboidea, R. Brown ... 117
robusta, R. Brown 123
stricta, Schrader 417
tuberculata, R. Brown ... 125
verrucosa, Cunningham ... 125
Caryotaxus nucifera, Zuccarini 411
grandis, Hort. 70
CEDRUS, *Link*.................. 59
Africana, Gordon 60
argentea, Loudon 60
Atlantica, *Manetti* 60
Deodara, *Loudon*............ 61

PAGE

CEDRUS.
Deodora alba spica, *Hort.* 423
„ crassifolia, *Hort.* 64
„ erectra, *Cripps* 65
„ *gigantea*, Knight 64
„ robusta, *Hort.* 64
„ *tenuifolia*, Knight 64
„ *verticillata glauca*, Cripps 65
„ viridis, *Hort* 64
elegans, Knight 60
Hispanica, Tournefort 153
Indica, De Chambr— 61
Libani, *Barrelier* 65
„ argentea, *Loudon* 66
„ *glauca*, Hort 66
„ nana, *Loudon* 66
„ pendula, *Knight* 66
Orientalis fœtidissima, Tournefort 143
Phœnicea, Renealm 65
CEPHALOTAXUS, *Siebold* 66
adpressa, Hort. 387
brevifolia, Hort. 387
coriacea, Knight 67
drupacea, *Siebold* 67
filiformis, Knight 68
Fortunei, *Hooker* 68
„ *fœmina*, Carrière 67
„ *mas*, Hort. 68
„ *pendula*, Carrière 68
grandis, Hort. 70
Koraiana, Hort. 338
pedunculata, *Siebold* 69
tardiva, Siebold 387
umbraculifera, *Siebold* 70
CHAMÆCYPARIS, *Spach* 70
Andelyensis, Hort 365
atrovirens, Hort 72
Boursierii, Carrière 85
Boursierii, Decaisne 163
ericoides, Carrière 363
decussata, Hort. 364
excelsa, Fischer 94
Kewensis, Hort 72
Lawsoniana, Parlatore 85
Nutkaensis, Spach 94
obtusa, Endlicher 367
pisifera, Endlicher 369
sphæroidea, *Spach* 71
„ atrovirens, *Knight* 72
„ aurea, *Hort.* 423
„ glauca, *Endlicher* 72

PAGE

CHAMÆCYPARIS.
sphæroidea nana, *Endlicher* 72
„ variegata, *Endlicher* 72
squarrosa, Endlicher 371
„ *leptoclada*, Endlicher 365
„ *variegata*, Endlicher 372
thujæformis, R. Smith 429
thurifera, Endlicher 100
Chamæpeuce obtusa, Zuccarini 367
COLUMBEA, *Salisbury* 35
quadrifaria, Salisbury 39
Colymbea, Salisbury 36
Bidwilli, Carrière 36
angustifolia, Bertoloni 37
Brasiliensis, Carrière 37—38
imbricata, Carrière 39
excelsa, Sprengel 45
Condylocarpus sempervirens, Salisbury 379
CRYPTOMERIA, *Don* 73
elegans, *Veitch* 73
gracilis, Hort. 73
Japonica, *Don* 74
„ araucarioides, *Hort.* 75
„ *elegans*, Hort 73
„ *elongata*, Regel 73
„ Lobbii, *Hort.* 76
„ nana, *Fortune* 76
„ *pygmæa*, Loudon 76
„ spiralis, *Hort.* 423
„ variegata, *Hort.* 76
„ vera, *Siebold* 423
„ *viridis*, Hort 76
nana, Lindley 76
viridis, Hort 76
CUNNINGHAMIA, *R. Brown* 76
cupressoides, Zuccarini 47
lanceolata, Van Houtte 77
selaginoides, Zuccarini 48
Sinensis, *R. Brown* 77
„ glauca, *Hort.* 77
CUPRESSUS, *Tournefort* 78
Africana, Miller 418
Americana, Catesby 382
Americana, Trautvetter 94
Arbor-Vitæ, Targ-Tozz 403
aromatica, Van Houtte 82
attenuata, *Gordon* 79
Australis, Persoon 119
Australis, Low 102
bacciformis, Willdenow 164
bacciformis, Knight 163

PAGE

CUPRESSUS.
Balfouriana, *Lemoine*...... 79
bambusacea, Olotanzan ... 188
Benthami, *Endlicher* 80
Bourgeauii, Hort........... 79
Californica, Hort. 82
Cashmeriana, Royle 97
cernua, Hort................. 80
Cheusanensis, Pluknet ... 74
Chilensis, Gillies........... 180
columnaris, Forster......... 43
Corneyana, *Knight* 80
Coulteri, Forbes 84
disticha, Linnæus 382
„ *nutans*, Aiton ... 385
„ *patens*, Aiton ... 382
Doniana, Hort. 102
elegans, Low................ 84
ericoides, Hort.............. 363
excelsa, *Scott*................. 82
expansa, Audibert 96
fastigiata, D. C. 95
„ *horizontalis*, D. C. 96
„ *thujæfolia*, Hort.... 97
„ *variegata*, Hort. ... 97
filiformis, Hort. 55
fœmina, Cæsalpina......... 95
Fothergilli, Pinet-Woburn 119
funebris, *Endlicher*......... 82
glauca, Lamarck 89
„ *tristis*, Carrière ... 89
„ *pendula*, Hort. ... 89
glandulosa, Hooker......... 90
Goensis, Hort. 89
Goveniana, *Gordon*......... 83
„ glaucescens, *Hort.* 424
gracilis, Hort. 80
Hartwegii, Carrière......... 91
horizontalis, Duhamel ... 96
imbricata, Nuttall 383
Japonica, Thunberg 74
juniperoides, Linnæus ... 418
Kewensis, Hort.............. 82
Knightiana, *Perry* 84
„ variegata, *Hort.* 85
Lambertiana, Gordon...... 91
„ *fastigiata*, Carrière 91
Lawsoniana, *Murray*...... 85
„ *aromatica*, Hort... 88
„ alba spica, *Hort.* 87, 424
„ alba spica nana,
„ *Hort.*... 424
„ alba variegata, *Lawson* 87

PAGE

CUPRESSUS.
Lawsoniana, argentea, *Hort.* 87
„ aurea, *Waterer* ... 87
„ cerulea, *Hort.*...... 424
„ elegantissima, *Barron* ... 424
„ erecta, *Hort.* 87
„ erecta, viridis, *A. Waterer*... 425
„ fragrans, *Standish* 88
„ *glauca nana*, Hort. 88
„ gracilis, *Hort.*...... 88
„ lutea, *Rollisson* ... 88
„ „ flavescens, *Cripps* ... 88
„ minima, *Hort.* ... 89
„ nana, *Hort.*......... 88
„ pendula alba, *Paul.* 89
„ *pumila*, Hort. 88
„ *pygmæa*, Hort. ... 89
„ *pyramidalis*, Hort. 87
„ *stricta*, Hort. 87
„ *viridis*, Hort. 87
Libani glauca, Knight ... 89
Lindleyi, Klotsch 84
„ *argentea variegata*, Hort. ... 85
Lusitanica, *Miller* 89
„ *elegans*, Rinz ... 89
„ *patula*, Tournefort 89
„ *pendula*, Hort. ... 89
„ variegata, *Lawson* 90
Mac-Nabiana, *Murray* ... 90
macrocarpa, *Hartweg*...... 91
„ *fastigiata*, Knight 91
„ Crippsi, *Hort.* ... 93
„ flagelliformis, *Cripps* 93
„ variegata, *Hort.*... 93
macrostachya, Hort. 120
majestica, Knight 100
mas, Cæsalpin 96
nana, Hort 73
„ *Mariana*,. Plukn 71
Nepalensis, Loudon 97
nivea, Lobb 79
nucifera, Hort.............. 126
Nutkaensis, *Hooker* 94
„ *argentea*, Hort. 95
„ aurea variegata, *Young* 425
„ compacta, *Hort.*... 425
„ glauca, *Hort.* 426

PAGE
CUPRESSUS.
Nutkaensis variegata, *Hort.* 95
Nootkatensis, Lambert 94
Orientalis, Hort. 96
patula, Persoon 55
pendula, Thunberg 55
pendula, Hort. 82
pendula, Heritier 89
pendula, Griffith 97
pendula, Staunton 81
pendulata, Hort. 55
pyramidalis, Tozzett 95
Reinwardtii, Hort. 91
religiosa nana, Hort. 100
Roylei, Carrière 102
Sabinoides, Humboldt 161
Schomburgkii, Van Houtte 100
sempervirens, *Linnæus* 95
„ horizontalis, *Miller* 96
„ *Indica*, E. I. Cmpy. 102
„ monstrosa, *Hort.* 97
„ *thujæfolia*, Carrière 97
„ variegata, Knight 97
Sinensis, Lee 89
Sinensis, Hort. 126
„ *glauca*, Van Houtte 89
„ *pendula*, Hort. 89
Skinnerii, Hort. 82
sphæroidea pendula, Hort. 72
„ *Kewensis*, Knight 72
squarrosa, Lawson 371
stricta, Miller 95
Tchugatskoyæ, Hort. 94
tetragona, Hort. 100
Thuja, Targ-Tozz 50
thujæformis, Parker 97
thujæoides, Low 97
thurifera, *Humboldt* 100
thurifera, Bentham 80
„ *elegans*, Hort. 84
„ *Knightiana*, Gordon 84
thyoides, Pavon 180
thyoides, Linnæus 71
„ *atrovirens*, Lawson 72
„ *Kewensis*, Hort. 72
„ *nana*, Loudon 72
„ *variegata*, Loudon 72
torulosa, *Don* 97
„ *elegans*, Hort. 100
„ majestica, *Hort.* 100
„ nana, *Hort.* 100
„ *religiosa*, Knight 100
„ viridis, *Hort.* 100

PAGE
CUPRESSUS.
Tournefortii, Audibert 95
Uhdeana, Gordon 100
variegata, Hort. 72
Virginiana, Plukenet 382
„ *Tradescanti*, Ray 382
Whitleyana, *Hort.* 102
DACRYDIUM, *Solander* 103
araucarioides, *Brongniart* 103
arthrotaxoides, Carrière 103
Beccarii, *Parlatore* 103
Colensoi, *Hooker* 104
cupressinum, *Solander* 104
distichum, Don 355
elatum, *Wallich* 105
„ *compactum*, Carrière 359
„ *tenuifolium*, Carrière 359
excelsum, Don 357
ferrugineum, Van Houtte 357
Franklinii, *Hooker* 106
„ Lindley 184
Huonense, Cunningham 106
Junghuhnii, Miquel 105
Kirkii, *Mueller* 107
laxifolium, *Hooker* 107
Lobbii, Hort. 104
Mai, Cunningham 354
Mayi, Van Houtte 354
plumosum, Don 182
spicatum, Hort. 350
taxifolium, Banks 354
taxoides, *Brongniart* 107
tenuifolium, Parlatore 359
tetragonum, Parlatore 184
thuioides, Solander 357
ustum, Vieillard 358
Vieillardii, Parlatore 359
DAMMARA, *Rumphius* 108
alba, Rumphius 111
alba, Makoy 112
Australis, *Lambert* 108
„ glauca, *Low* 109
brevifolia, Hort. 109
Bidwillii, Hort. 113
Brownii, Hort. 113
hypoleuca, *Hort.* 109
longifolia, Lindley 113
loranthifolia, Spach 111
macrophylla, *Lindley* 110
Moorii, *Lindley* 110
obtusa, *Lindley* 110
ovata, *Moore* 112

PAGE
DAMMARA.
Orientalis, *Lambert* 111
„ alba, *Knight* 112
„ *palleus*, Carrière 112
pinnata, Parmentier 189
robusta, *Moore* 113
Rumphii, Presl 111
Vitiensis, *Seemann* 113
DISELMA, *J. Hooker* 114
Archeri, *J. Hooker* 114
Dombeya Araucana, Rœuschel 39
Chilsensis, Lamarck 39
excelsa, Lambert 45
EUTACTA, *Link.* 43
Cookii, Carrière 43
Cunninghamii, Link 44
excelsa, Link 45
minor, Carrière... 43
Muelleri, Carrière 42
Pancheri, Carrière 43
Rulei, Varlot 42
„ *polymorpha*, Carrière 42
Eutassa Cunninghamii, Spach 44
heterophylla, Salisbury ... 45
FITZ-ROYA, *Hooker* 115
Patagonica, *Hooker* 115
FRENELA, *Mirbel* 116
arenosa, *Hort.* 117
Australis, *Hooker* 117
„ R. Brown 120
Australis, Endlicher 119
calcarata, *Cunningham* ... 117
canescens, *Parlatore* 118
columellaris, *Mueller* 118
crassivalvis, Miquel 123
Drummondii, *Parlatore* ... 118
Endlicheri, *Parlatore* 119
ericoides, Endlicher 117
Fontanesii, Mirbel 58
Fothergilli, *Endlicher* 119
fruticosa, Endlicher 119
glauca, Mirbel ....120—123
Gulielmi, *Parlatore* 119
Gunnii, *Endlicher* 120
Hugelii, *Carrière* 121
Macleyana, *Parlatore* 121
macrostachya, Knight 120
Moorii, *Parlatore* 122
Muelleri, *Parlatore* 122
Parlatorei, *Mueller* 122
propinqua, *Cunningham* 123
pyramidalis, *Carrière* 123
rhomboidea, Endlicher ... 117

PAGE
FRENELA.
rigida, *Endlicher* 123
robusta, *Cunningham* 123
Roei, *Endlicher* 124
subcordata, *Parlatore* 124
subumbellata, *Parlatore* 124
sulcata, *Parlatore* 124
triquetra, Spach 117
tuberculata, *Mirbel* 125
variabilis, Carrière 120
Ventenatii, Mirbel 117
verrucosa, *Cunningham* ... 125
Ginkgo biloba, Linnæus 374
„ *laciniata*, Hort. 375
GLYPTOSTROBUS, *Endlicher* 126
heterophyllus, *Endlicher* 126
Horsfieldii, Knight 356
pendulus, Endlicher 385
JUNIPERUS, *Linnæus* 127
alba, Knight 162
Alpina, Loddiges 146
Alpina, Clusius 136
„ *minor*, Booth 136
„ *Suecica*, Plukenet... 136
Andina, Nuttall 162
aquatica, Roxburgh 126
arborescens, Mœnch 154
argentea, Hort. 156
aromatica, Hort. 82
Attica, Heldriech 135
bacciformis, Carrière 164
„ Knight 163
Barbadensis, Michaux ... 155
„ Linnæus ... 140
Bedfordiana, Knight 155
Bermudiana, *Linnæus* ... 140
Biassolettii, Link 135
brevifolia, Parlatore 130
Californica, Carrière 162
Canadensis, *Loddiges* 129
Canariensis, Knight 129
canescens, E. I. Company 147
Capensis, Lamarck 418
Caroliniana, Du Roi 155
„ Hort. 154
Caucasica, Fischer 137
cæsia, *Carrière* 167
Cedrus, *Webb* 129
„ brevifolia, *Gordon* 130
„ *Bermudæ*, Ray ... 140
cernua, Roxburgh 158
Cerrosianus, *Kellogg* 167
Chinensis, Roxburgh 330

PAGE

JUNIPERUS.
Chinensis *Linnæus*......... 158
„ *argentea*, Hort. 159
„ *aurea*, Young... 426
„ densata, *R. Smith* 159
„ *Corneyana*, Gordon 81
„ fœmina, *Linnæus* 158
„ Leeana, *Hort* ... 426
„ mas, *Linnæus*... 158
„ *procumbens*, Endlicher 160
„ *Smithii*, Loudon 165
„ variegata, *Fortune* 159
cinerea, Carrière 151
communis, *Linnæus* 131
„ Thunberg 138
„ *Alpina*, Wahlenberg 136
„ *Caucasica*, Endlicher 137
„ compressa, *Carrière* 133
„ Cracovia, *Loddiges* 132
„ *depressa*, Pursh 129
„ *fastigiata*, Loudon............ 132
„ *hemisphærica*, Parlatore ... 134
„ Hibernica, *Loddiges* 132
„ *Hispanica*, Lawson 133
„ *Indica*, Madden 142
„ „ *Alpina*, Winterbottom.. 142
„ „ *nana*, Madden 142
„ *macrocarpa*, Spach......... 135
„ *Montana*, Aiton 136
„ *nana*, Loudon. 136
„ *oblonga*, Loudon............ 137
„ *pendula*, Hort. 139
„ *stricta*, Carrière 132
„ Suecica, *Loudon*............ 132
„ *vulgaris*, Loudon............ 131

PAGE

JUNIPERUS
communis, *Wittmanniana*, Carrière...... 139
compressa, Rinz 133
conferta, *Parlatore* 133
Corneyana, Hort............ 81
Cunninghami, Hort. 117
cupressifolia, Hort. 150
Davurica, *Pallas*............ 141
„ Hort............... 129
dealbata, Loudon............ 162
„ Douglas 129
densa, *Gordon* 141
Deppeana, Steudel 161
depressa, Booth 129
dimorpha, Roxburgh 158
diœcia, Makoy 158
drupacea, *Labill* 133
dumosa, Wallich 152
„ Hort. 156
echinoformis, Rinz 134
elata, Roxburgh 105
elegans, Hort. 150
elliptica, Van Houtte 135
ericoides, Noisette 117
„ Hort 363
excelsa, *Biebert* 143
„ Madden 148
„ Lewis 162
„ *glauca*, Hort....... 144
„ *procera*, Carrière . 162
„ stricta, *Rollisson* . 144
„ variegata, *Hort*... 144
„ *vera*, Hort.......... 143
fastigiata, Knight 132
flaccida, *Schlecten* 145
flagelliformis, Reeves 158
fœmina, Hort. 158
fœtida Sabina, Spach 150
„ *Davurica*, Spach... 141
„ *excelsa*, Spach 143
„ *flaccida*, Spach...... 145
„ *Hispanica*, Spach... 153
„ *multicaulis*, Spach. 146
„ *tamariscifolia*, Spach............... 151
Fortunii, Hort............... 165
fragrans, Knight............ 162
gigantea, Roezl 161
glauca, Willdenow 156
Gossainthanea, Loddiges . 155
gracilis, Endlicher 145
„ Hort. 81

PAGE

JUNIPERUS.
hemisphærica, *Presl.* 134
Hermanni, Persoon 162
Hibernica, Loddiges 132
,, *compressa*, Hort 133
Hispanica, Presl........... 133
,, Miller 153
horizontalis, Mœnch 146
Hudsonica, Loddiges 146
incurva, Hamilton 147
interrupta, Wendland...... 137
isophyllos, Kotschy......... 143
Japonica, *Carriere* 160
,, alba, *Standish*... 161
,, aurea, *Fortune*. 160
Lambertiana, Wallich ... 152
Langoldiana, Hort.......... 164
Lasdeliana, Lawson 162
latifolia arborea, Tournefort.......................... 133
littoralis, Maximo 133
Lobelii, Gussone 135
Lusitanica, Miller 150
Lycia, Pallas 150
,, Linnæus 165
Mac-Nabiana, Lawson ... 90
macrocarpa, *Sibthorp* 135
major, Bellonius 133
,, *Americana*, Parkinson 154
,, *bacca-cærulea*, Tournefort 135
maximus, Lobel 135
Mexicana, *Schlect* 161
minor, Fuchs 131
,, *montana*, Bauhin... 136
Monspeliensium, Lobel ... 137
nana, *Willdenow* 136
,, *Alpina*, Endlicher . 136
,, *hemisphærica*, Carrière 134
,, *montana*, Endlicher 129
neaboriensis, Lawson 135
Nepalensis, Rinz 147
oblonga, *Loudon* 137
,, *pendula*, Loudon 139
oblongata, Gussone......... 135
Occidentalis, *Hooker* 162
,, *fragrans*, Hort. 163
Olivieri, Carrière........... 143
oophora, Kunze 153
oppositifolia, Mœnch 140
Oxycedrus, *Linnæus* 137

PAGE

JUNIPERUS.
Oxycedrus, *brevifolia*, Hochst 130
,, *echinoformis*, Van Houtte 134
,, *Phœnicea*, Dodon 137
,, *Taurica*, Hort. 138
,, *Wittmanniana*, Hort.......... 139
pachyphlæa, *Torrey* 164
pendula vera, Hort.......... 139
Perkinsii, Hort 144
Philippsiana, Wallich ... 105
Phœnicea, *Linnæus*......... 164
,, Lycia, *Loudon*. 165
,, *malacocarpa*, Endlicher ... 165
,, *sclerocarpa*, Endlicher ... 164
plochyderma, *Torrey* 167
polycarpos, Kotschy 143
procera, *Hochst* 162
procumbens, Siebold 160
prostrata, *Persoon* 146
prostrata, Risso 150
Pseudo-Sabina, *Fischer*... 145
pyriformis, Lindley 162
pyramidalis, Hort. 132
racemosa, *Risso* 167
recurva, *Don* 147
,, *densa*, Hort. 141
recurva nana, Hort. 141
Reevesiana, Hort............ 158
religiosa, *Royle*.............. 148
repanda, Hort............... 147
repens, Nuttall.............. 146
rigida, Sieber 105
rigida, Wallich.............. 152
rigida, *Siebold* 138
rigida, Noisette 123
rigida, Pavon 337
rufescens, *Link*. 138
,, *brevifolia*, Endlicher 130
Sabina, *Linnæus*........... 150
,, *Alpina*, Hort.......... 151
,, *cupressifolia*, Aiton 150
,, *elegans*, Booth 151
,, *excelsa*, Antoine...... 143
,, *horizontalis*, Hort.... 150
,, *humilis*, Hooker...... 146
,, *isophyllos*, Antoine . 143

PAGE
JUNIPERUS.
Sabina nana, *Hort.* 150
„ *pachyphlœa,* Antoine 164
„ *polycarpos,* Antoine 143
„ *prostrata,* Loudon... 146
„ *pumila,* Hort.......... 150
„ *tamariscifolia,* Aiton 151
„ *Taurica,* Pallas 143
„ variegata, *Loudon*... 151
„ *vulgaris,* Endlicher 150
Sabinoides, *Endlicher* ... 151
saxatilis, Pallas 136
Schottii, Hort. 157
Sheppardii, Hort. 426
Sibirica, Burgsdorff 136
sp. nova, Fortune............ 167
sphærica, *Lindley* 165
„ glauca, *Fortune* 167
sphærocarpa, Antoine ... 135
squamata, *Don*.............. 152
squamosa, Hamilton 152
stricta, Hort. 144
„ Hort. 132
struthiacea, Knight......... 158
Suecica, Miller............... 132
„ *pyramidalis,* Manetti 133
Taurica, Strangways 138
taxifolia, *Hooker*........... 139
tetragona, *Schlect*........... 166
tetragona, Mœnch 164
„ *osteosperma,* Torrey 163
Thunbergii, Hooker 158
thurifera, *Linnæus*......... 153
thurifera, Bonplaud 100
thurifera, Parlatore......... 151
tripartita, Hort. 157
turbinata, Gussone......... 153
umbilicata, Grenier......... 135
uvifera, Don.................. 183
venusta, Hort. 144, 426
Virginiana, *Linnæus* 154
„ alba variegata, *Hort.* 157
„ aurea variegata, *Hort.* 157
„ *Australis,* Carrière... 155
„ *argentea,* Van Houtte 156
„ Barbadensis, *Loudon* 155
„ Caroliniana, *Loddiges* 155
„ *Chamberlainii,* Hort. 156
„ *cinerescens,* Hort. ... 156
„ dumosa, *Loddiges* ... 156
„ glauca, *Hort.* 156
„ *gracilis,* Hort......... 155
„ humilis, *Hort.* 156

PAGE
JUNIPERUS.
Virginiana pendula, *Hort.* . 156
„ „ fœmina, *Hort.* 157
„ „ mas, *Hort.* ... 157
„ „ viridis, *Hort.* 157
„ *pumila,* Hort.......... 156
„ Schottii, *Hort.* 157
„ *sparsifolia,* Hort. ... 155
„ *stricta,* Hort. 157
„ *stricta,* Hort. 155
„ tripartita, *R. Smith* 157
„ *vera,* Loddiges 154
„ *viridis,* Hort. 157
„ *vulgaris,* Carrière ... 154
vulgaris, Bauhin 131
„ *arborea,* Bauhin ... 132
„ *fruticosa,* Duhamel 131
„ *fruticosa,* Cupan ... 134
Wallichiana, Hooker...... 152
Wallichii, Hort. 159
Webbii, Carrière 129
Wilkommii, Antoine 135
Wittmanniana, Fischer... 139
Keteleeria Fortunei, Carrière... 27
LARIX, *Link*..................... 168
Altaica, Fischer 173
Americana, Michaux 175
„ *brevifolia,* Carrière 176
„ *pendula,* Loudon . 177
„ *rubra,* Loudon ... 175
Archangelica, Lawson ... 173
Cedrus, Miller 65
communis, Lawson 169
Dahurica, *Turczan* 168
decidua, Miller............... 169
„ *rossica,* Henk. ... 173
Europæa, *De C.* 169
„ alba, *Endlicher* ... 171
„ *Dahurica,* Loudon 168
„ *Godsallii,* Loudon 170
„ pendula, *Loudon*... 170
„ repens, *Loudon* ... 170
„ rubra, *Endlicher*... 171
„ Sibirica, *Loudon*... 173
excelsa, Link................. 169
Fraseri, Curtis............... 175
Gmelini, Ledebour 168
Griffithiana, Hort. 171
Griffithii, *Hooker* 171
intermedia, Lawson 173
Japonica, Carrière 173
Kœmpferi, Fortune......... 360
Kamtschatica, *Carrière*... 172

PAGE
LARIX.
Ledebourii, *Ruppr.* 173
leptolepis, *Siebold* 173
Lyallii, *Parlatore* 175
microcarpa, *Hooker* 175
nigra, Hort. 177
Nuttallii, Parlatore 176
Occidentalis, *Nuttall* 176
Orientalis, Tournefort ... 65
patula, Salisbury 65
pendula, *Salisbury* 177
Pseudo-larix, Loddiges ... 173
pyramidalis, Salisbury ... 169
rossica, Sabine 173
Sibirica, Ledebour 173
Sikkimensis, Hooker 171
tenuifolia, Salisbury 175
vulgaris, Fischer 169
Laurus julifera, Kæmpfer ... 188
Leichardtia Macleana, Shepherd 121
LEPIDOTHAMNUS, *Philippi* 178
Fonki, *Philippi* 178
LIBOCEDRUS, *Endlicher* ... 179
Chilensis, *Endlicher* 180
„ viridis, *Hort.* ... 181
Craigiana, Low 181
Doniana, *Endlicher* 182
decurrens, *Torrey* 181
„ depressa, *Scott* 426
excelsa, Hort. 181
gigantea, Low 181
gigantea glauca, Lawson 181
tetragona, *Endlicher* 183
Lignum emanum, Rumphius 346
Lycopodium arboreum, Jungh 105
Maki-fœtens, Kæmpfer 340
MICROCACHRYS, *Hooker* ... 184
tetragona, *J. Hooker* 184
tetragona fœmina, J. Hooker 192
tetragona, Archer 114
Micropeuce Sieboldii, Spach ... 32
Myrica Nagi, Thunberg 188
NAGEIA, *Gærtner* 185
Beccarii, *Gordon* 186
Blumei, *Gordon* 186
cuspidata, *Gordon* 187
grandifolia, *Gordon* 187
Japonica, *Gærtner* 188

PAGE
NAGEIA.
Japonica, variegata, *Gordon* 189
latifolia, *Gordon* 189
minor, *Carrière* 190
ovata, *Gordon* 190
„ variegata, *Gordon* ... 191
Octoclinis Macleyana, Mueller 121
Backhousii, Hill 121
Pachylepis Commersonii, Brongn. 417
cupressoides, Brongn. 417
juniperoides, Brongn. 418
Parolinia juniperoides, Endlicher 418
Peuce balsamea, Richard 200
PHEROSPHÆRA, *Archer* ... 192
Hookeriana, *Archer* 192
PHYLLOCLADUS, *Richard* 193
Alpina, *Hooker* 193
asplenifolia, Hooker 194
Billardierii, Mirbel 194
glauca, *Carrière* 195
hypophylla, *Hooker* 193
rhomboidalis, *Richard* ... 194
trichomanoides, *Don* 195
„ *Alpina*, Parlatore 193
„ glauca, *Parlatore* 195
PICEA, *Don* 196
Ajanensis, Fischer 18
alba, Link 3
„ *echinoformis*, Carrière 4
„ *nana*, Link. 4
Alcockiana, Carrière 4
amabilis, Lobb 219
„ *Loudon* 213
„ *magnifica*, Hort. ... 219
„ *robusta*, Hort. 219
Apollinis, *Rauch* 197
balsamea, *Loudon* 200
„ longifolia, *Loudon* 201
„ *prostrata*, Knight 206
„ variegata, *Knight* 201
brachyphylla, *Gordon* 201
bracteata, *Loudon* 202
Brunoniana, Spach 21
Californica, Carrière 30
Canadensis, Link. 22
Cephalonica, *Loudon* 203
„ *Apollinis*, Gordon 197
Cilicica, *Rauch* 214
cinerea, Baumann 211
cœrulea, Link. 18
concolor, *Gordon* 216

PAGE
PICEA.
Douglasii, Link. 24
Engelmannii, Engelmann 5
excelsa, Link.................. 6
„ *conica*, Carrière 11
„ *denudata*, Carrière... 8
„ *eremita*, Carrière ... 8
„ *pyramidalis*, Carrière 10
firma, *Siebold* 204
Fortunei, Murray 27
Fraseri, *Loudon* 205
„ glauca, *Wm. Paul*... 206
„ *Hudsonia*, Loudon 206
„ Hudsonica, *Knight* 206
grandis, *Loudon* 216
grandis, Lobb 218
Herbertiana, Madden...... 222
hirtella, Loudon 212
holophylla, *Gordon*......... 206
Hudsonica, Hort. 206
Jezoensis, Carrière 11
„ Carrière 27
Khutrow, Carrière 19
Kukunaria, Wenderth ... 197
lasiocarpa, Hort............. 218
Latinorum, Bauhin 6
Lowiana, *Gordon*............ 218
Lowi, Hort. 218
magnifica, *Murray*......... 219
major prima, Bauhin 6
Menziesii, Carrière 12
Mertensiana, French Gardens 29
Metensis, Hort. 211
microsperma, Carrière ... 11
Morinda, Link 19
Naphtha, Knight 222
nigra, Link 13
„ *fastigiata*, Carrière 14
nobilis, *Loudon* 207
„ glauca, *Hort.* 208
Nordmanniana, *Loudon*.. 208
Numidica, *R. Smith* 220
obovata, Ledebour 14
Orientalis, Link 15
Parsonsi, Hort............... 218
pectinata, *Loudon* 209
„ fastigiata, *Booth*.. 211
„ *leioclada*, Hort. ... 208
„ *Metensis*, Hort. ... 211
„ nana, *Knight* 211
„ pendula, *Godefroy* 211
„ pyramidalis, *Hort.* 210

PAGE
PICEA.
pectinata tortuosa, *Booth*. 211
„ variegata, *Hort* ... 211
Pichta, *Loudon* 221
„ *alba*, Hort. 214
„ *longifolia*, Hort.... 214
Pindrow, *Loudon* 222
„ variegata, *Hort*.... 224
Pinsapo, *Loudon*............ 224
„ glauca, *Hort.* ... 427
„ variegata, *Hort*.. 225
polita, Carrière 16
pyramidalis, Hort. 210
religiosa, *Loudon*........... 212
„ glaucescens, *Gordon* 213
Rinzi, Hort. 214
rubra, Link.................. 17
Schrenkiana, Fischer 18
Sibirica, Hort................ 221
„ *alba*, Hort. 214
Sitchensis, Carrière 12
taxifolia, Hort............... 209
„ *pyramidalis*, Hort. 210
Veitchii, *Hort*................ 226
vulgaris, Link................ 6
Webbiana, *Loudon* 226
Wittmanniana, Fischer ... 15
PINUS, *Linnæus* 228
Abasica, Carrière 237
Abchasica, Fischer 237
Abies, Du Roi 209
Abies, Pallas 14
Abies, Thunberg 16
Abies, Linnæus 6
„ *Americana*, Marsh.. 22
Acapulcensis, Don 290
Aculcensis, Roezl........... 304
adunca, Bosc. 270
alba, Aiton 3
albicaulis, Engelmann ... 302
Alcoquiana, Parlatore ... 4
altissima, Ledebour 259
„ Banks 239
alopecuroides, Hort. 285
amabilis, Douglas 213
Amecaensis, Roezl 304
Americana, Du Roi 22
„ Gërtner 17
„ *palustris*, Duhamel 260
„ *rubra*, Waugh.. 17
angulata, Roezl 319
Antoineana, Roezl 316

PAGE
PINUS.
Aphernousli, Loudon 295
Apollinis, Antoine 197
Apulcensis, *Lindley* 290
Arabica, Sieber 238
Araucana, Molina 39
Araucanensis, Knight ... 252
Araragi, Siebold........... 32
aristata, *Engelmann* 291
Astecaensis, Roezl 290
Atlantica, Endlicher 60
atrovirens, Roezl........... 304
Aucklandii, Loddiges ... 268
Australis, *Michaux*......... 260
„ excelsa, *Loudon*... 261
Austriaca, *Hoss* 229
„ variegata, *Lawson* 230
Ayacahuite, *Ehrenberg* ... 292
„ *Blanco*, Roezl...... 294
„ *macrocarpa*, Hartweg 311
„ *colorada*, Ehrenberg 311
Aztecaensis, Roezl 301
Backhousiana, Roezl 325
balsamea, Linnæus......... 200
Banksiana, *Lambert* 230
Balfouriana, *Jeffrey* 293
Beardsleyi, Murray......... 281
Benthamiana, *Hartweg* ... 261
Besseriana, Roezl 287
bicolor, Maximo 4
Blanco, Knight 298
Bolanderi, *Parlatore* 231
Boothiana, Roezl........... 320
Boursieri, Carrière 232
brachyphylla, Parlatore ... 201
brachyptera, *Wislizenus*... 263
bracteata, Don 202
Brogoittii, Hort. 323
Brunoniana, Endlicher... 21
Brutea, *Tenore* 232
bullata, Roezl 301
Bungeana, *Zuccarini* 263
Buonapartea, *Roezl*......... 294
Cairica, Don 238
Calabrica, Hort. 240
Californica, Hartweg...... 288
„ Loisel........... 270
Canadensis Willdenow ... 22
„ *bifolia*, Duhamel 256
„ *quinquefolia*, Duhamel 322

PAGE
PINUS.
Canadensis trifolia, Duhamel......................... 283
Canariensis, *Smith* 264
Caramanensis, Vilmorin.. 240
Carpatica, Hort............. 253
Carrièri, Roezl 312
Caucasica, Fischer 259
Cavendishiana, Paxton ... 272
Cebenensis, Hort............ 239
Cedrus, Linnæus............ 65
Cedrus, Roezl 308
Cembra, Thunberg 317
Cembra, *Linnæus* 295
„ *excelsa*, Maximo... 296
„ *fruticosa*, Griesbeck 318
„ *Helvetica*, Loddiges 295
„ *humistrata*, Madden 297
„ *Mandschurica*, Regel..... 296
„ monophylla, *Carrière* 296
„ *nana*, Hort......... 297
„ *pumila*, Endlicher 297
„ pygmæa, *Loudon* 297
„ *Rossica*, Hort....... 296
„ Sibirica, *Loudon*.. 296
„ *stricta*, Hort. 295
„ *vulgaris*, Endlicher 295
„ variegata, *Hort*.... 297
cembroides, Zuccarini 274
cembroides, *Gordon* 265
Cephalonica, Endlicher ... 203
Chalmaensis, Roezl 325
Chihuhuana, *Wislizenus*. . 266
Chinensis, Knight 249
Chilghosa, Elphinstone ... 268
Chylla, Loddiges............ 299
Cilicica, Kotschy............ 214
cinerea, Roling............... 6
coarctata, Roezl 320
Colchica, Booth 238
Comonfortia, Roezl......... 308
concolor, Parlatore 216
conglomerata, Græffer ... 232
contorta, Douglas............ 232
cornea, Roezl 297
corrugata, Roezl 304
Corsicana, Hort 239
Coulteri, *Don* 266
Craigiana, Balfour......... 281

PAGE

PINUS.
Cubensis, Hort ... 267
cupressoides, Molina ... 183
Dahurica, Fischer ... 168
Dammara, Lambert ... 111
Decaisneana, Roezl ... 309
Decandolleana, Roezl ... 308
decidua, Wallich ... 21
deflexa, Torrey ... 289
densiflora, Siebold ... 233
Deodara, Roxburgh ... 61
dependens, Roezl ... 308
Devoniana, Lindley ... 298
Dicksonii, Hort ... 299
dietritis, Hort ... 251
dioica, Arrabida ... 37
divaricata, Hort ... 230
Dolleriana, Roezl ... 321
domestica, Matthioli ... 252
Don Pedri, Roezl ... 311
Douglasii, Sabine ... 24
dumosa, Lambert ... 21
Durangensis, Roezl ... 294
echinata, Miller ... 243
„ Hort ... 245
Edgariana, Hartweg ... 246
edulis, Wislizenus ... 274
Ehrenbergii, Endlicher ... 308
elegans, Roezl ... 320
Endlicheriana, Roezl ... 313
„ *longifolia*, Roezl 309
Engelmanni, *Carrière* ... 268
Erzeroomica, Calvert ... 259
Escarena, Hort. Soc. ... 250
Escandoniana, Roezl ... 278
excelsa, Lamarck ... 6
excelsa, Wallich ... 299
excorticata, Gordon ... 263
exserta, Roezl ... 319
Fenzlii, Kotschy ... 240
fertilis, Roezl ... 265
filifolia, *Lindley* ... 301
Finlaysoniana, Wallich ... 242
Fischeri, Booth ... 245
flexilis, *Torrey* ... 302
Fortunei, Parlatore ... 27
Fraseri, Loddiges ... 283
„ Pursh ... 205
Fremontiana, *Endlicher* 235
frondosa, Roezl ... 304
Galocote, Roezl ... 287
Geitmeri, Roezl ... 304
Genuensis, Cook ... 236

PAGE

PINUS.
Georgica, Hort ... 260
Gerardiana, *Wallich* ... 268
glauca, Mœnch ... 3
Gordoniana, Hartweg ... 305
gracilis, Roezl ... 308
grandis, Douglas ... 216
„ Roezl ... 320
Greggi, *Engelmann* ... 270
Grenvilleæ, *Gordon* ... 303
Haageana, Roezl ... 320
Halepensis, *Aiton* ... 236
„ *Maritima*, Loudon ... 237
„ *minor*, Loudon ... 236
„ Pityusa, Steven ... 237
„ *rotundata*, Carrière 232
„ *Salzmanni*, Dunal 255
„ *Syriaca*, Rauch ... 237
hamata, Roezl ... 294
Hamiltonii, Tenore ... 250
Hartwegii, *Lindley* ... 304
Heldreichii, Christ ... 240
Hendersoni, Roezl ... 301
heteromorpha, Roezl ... 319
heterophylla, Endlicher ... 29
Hierosolymitana, Duhamel ... 236
hirtella, Humboldt ... 212
Hispanica, Cook ... 255
holophylla, Parlatore ... 206
horizontalis, Roezl ... 321
Hoseriana, Roezl ... 278
Hudsonica, Lamarck ... 230
Hugelii, Roezl ... 287
Huisquilucaensis, Roezl... 308
Indica, Manetti ... 299
inflexa, Roezl ... 313
inops, *Solander* ... 238
insignis, *Douglas* ... 270
„ *macrocarpa*, Hartweg ... 282
insularis, *Endlicher* ... 271
intermedia, Fischer ... 243
interposita, Roezl ... 287
Iztacehuatli, Roezl ... 304
Japonica, Loudon ... 249
„ Antoine ... 233
Jeffreyii, *Balfour* ... 272
Jeffreyana, Van Houte ... 272
Jezoensis, Antoine ... 11
Jostii, Roezl ... 301
Kamtschatica, Endlicher . 172

PAGE

PINUS.
Kasiya, *Royle* 272
Kæmpferi, Lambert 360
Kegelii, Roezl 287
Keteleeri, Roezl 301
Khasyana, Hooker 272
Khutrow, Royle 19
Koraiensis, *Siebold* 306
Krelagi, Roezl 304
Lambertiana, *Douglas* 307
　„ *brevifolia*, Hooker 302
lanceolata, Lambert 77
laricina, Du Roi 177
Laricio, *Poiret* 239
　„ *Austriaca*, Loudon 229
　„ Calabrica, *Delamel* 240
　„ Caramanica, *Loudon* 240
　„ contorta, Hort. 240
　„ *Montana*, Hort. 240
　„ *Monspeliensis*, Vilmorin 255
　„ *nana*, Hort. 240
　„ *nigrescens*, Parlatore 229
　„ *Pallasiana*, Loudon. 247
　„ pendula, *Carrière* 241
　„ pygmæa, *Rauch* 240
　„ *Pyrenaica*, Loudon 255
　„ subviridis, *Duhamel.* 240
　„ *tenuifolia*, Parlatore 255
Larix, Pallas 173
　„ Thunberg 173
　„ Linnæus 169
　„ *nigra*, Mœnch 177
　„ *rubra*, Marsh 175
lasiocarpa, Hooker 213
Latteri, Madden 249
Lawsoni, *Roezl* 273
laxa, Ehrhart 3
Ledebouri, Endlicher 173
leiophylla, *Schiede* 308
Lemoniana, Bentham 251
leptolepis, Endlicher 173
Lerdoi, Roezl 308
Leroyi, Roezl 312
Lindleyana, *Gordon* 309
Llaveana, *Schiede* 274
　„ *var.*, with thin shelled seed, Hartweg 235
Loddigesii, Loudon 283
Loiseleuriana, Carrière 232
longifolia, *Roxburgh* 275
lophosperma, *Lindley* 310
Loudoniana, *Gordon* 311

PAGE

PINUS.
Lowi, Roezl 313
lutea, Loddiges 243
　„ Makoy 261
McIntoshiana, Lawson 232
macrocarpa, Lindley 266
macrophylla, Lindley 312
macrophylla, Wislizenus 268
Maderiensis, Tenore 252
Magellensis, Schow 240
magnifica, Roezl 298
Mariana, Du Roi 13
maritima, Aiton 239
　„ Lambert 237
　„ Lamarck 249
　„ *minor*, Duhamel 251
　„ *prima*, Matthioli 237
　„ *trocata*, Knight. 251
Marylandica, Booth 13
Massoniana, Parlatore 286
　„ Lambert 249
Massoniana, *Siebold* 241
Menziesii, Douglas 12
Merkiana, *Vriese* 242
Mertensiana, Bougard 29
Michoacaensis, Roezl 301
microcarpa, Lambert 175
　„ Roezl 287
mitis, *Michaux* 243
monophylla, Torrey 235
Monspeliensis, Salzmann 255
monstrosa, Roezl 320
Montana, Baumann 245
　„ Wahlenberg 245
　„ Lamarck 295
Monte-Allegri, Roezl 308
Montereyensis, Rauch 270
Montezumæ, *Lambert* 313
　„ *Lindleyi*, Loudon 309
monticola, *Douglas* 314
Morinda, Hort. 19
Mugho, *Bauhin* 244
　„ *humilis*, Neal 253
　„ nana, *Loudon* 245
　„ rostrata, *Antoine* 245
　„ rotundata, *Link.* 245
　„ uliginosa, Wimmer 245
Mughus, *Loudon* 244
Mulleriana, Roezl 287
muricata, Don 246
　„ *var.*, Bolander 231
Murrayana, Balfour 246
neglecta, Low. 249

PAGE

PINUS.
Neoza, Govan 268
Nepalensis Pinet, Woburn 272
„ Royle 249
Ne-plus-ultra, Roezl 325
Nesselrodiana, Roezl 320
nigra, Aiton 13
„ Link..................... 229
nigrescens, Hort. 229
nigricans, Hoss.............. 229
nitida, Roezl................. 301
nivea, Booth 324
nobilis, Douglas.............. 207
Nootkatensis, Manetti 281
Nordmanniana, Steven ... 208
Northumberlandiana, Roezl 320
Nova Hollandica, Loddiges 249
Nova Zealandica, Loddiges 249
nummularia, Japanese..... 173
obliqua, Sauter 245
obovata, Antoine.............. 14
„ *Schrenkiana*, Parlatore 18
Ocampi, Roezl 298
„ *Devoniana*, Roezl ... 298
Occidentalis, *Swartz*........ 315
„ Hort............... 319
„ Humboldt 313
Ocote, *Roezl* 301
oocarpa, *Schiede* 315
oocarpoides, *Bentham* 316
Orgisiana, Roezl 321
Orientalis, Friwaldsky 208
„ Linnæus 15
„ *longifolia*, Ledebour. 18
Orizabæ, *Gordon* 316
osteosperma, Wislizenus ... 274
Padufia, Ledebour 259
Pallasiana, *Lambert*......... 247
Palmiensis, French Gardens 260
Palmieri, Manetti 260
palustris, Miller 260
„ *excelsa*, Booth.... 261
Papeleui, Roezl.............. 304
Paroliniana, Webb......... 238
Parryana, *Gordon*........... 277
Parryana, Parlatore........ 293
parviflora, *Siebold* 317
patula, *Schiede* 278
„ *erecta*, Hort. 279
„ macrocarpa, *Schiede*.. 279
„ stricta, *Bentham*...... 279

PAGE

PINUS.
Paulikowskiana, Roezl ... 312
Paxtoni, Roezl 320
pectinata, Lamarck 209
Peloponnesiaca, Haage..... 197
pendula, Aiton 177
„ Griffith................ 299
penicillus, Lapeyrouse...... 255
Persica, *Strangways* 248
Peuce, *Grisebeck* 318
Picea, Du Roi 6
„ Willdenow 209
„ Tournefort 208
„ *conica*, Endlicher..... 11
Pichta, Fischer.............. 221
„ *longifolia*, Hort....... 214
Pinaster, *Aiton*.............. 249
„ *Aberdoniæ*, Loudon.. 250
„ *altissima*, Lamarck... 250
„ *Escarena*, Loudon ... 250
„ Hamiltonii, *Tenore*... 250
„ *Hispanica*, Roxas ... 255
„ Lemoniana, *Loudon* . 251
„ *major*, Duhamel 250
„ minor, *Loudon* 251
„ variegata, *Hort.* 251
Pinceana, *Gordon*........... 280
Pindrow, Royle 222
Pinea, *Linnæus*............... 252
„ *Americana*, Hort....... 252
„ *Artica*, Hort............ 252
„ *Chinensis*, Knight...... 252
„ Cretica, *Loudon* 253
„ fragilis, *Duhamel* 253
„ *Tarentina*, Manetti ... 253
Pinsapo, Endlicher 224
„ *variegata*, Lawson ... 225
Pithyusa, Strangways...... 237
polita, Antoine.............. 16
Poiretiana, Hort............. 239
ponderosa, *Douglas*......... 281
Popocatepetli, Roezl......... 311
prasina, Roezl 278
protuberans, Roezl 319
Pseudo-Halepensis, Denhardt 255
Pseudo-Larix, Steudel ... 173
Pseudo-Strobus, *Lindley*... 320
Pseudo-Tæda, *Tenore* 290
Pumilio, *Hænke* 253
„ *rotundata*, Hort....... 245
pungens, *Michaux* 254
pygmæa, Fischer 297

PAGE
PINUS.
pyramidalis, Reuss 245
„ Hort. 239
Pyrenaica, *Lapeyrouse* 255
quadrifolia, Parry 293
radiata, *Don* 282
Regeliana, *Roezl* 321
Religiosa, Humboldt 212
resinosa, *Solander* 256
„ Roezl 304
retracta, Roezl 325
Richardiana, Roezl 309
rigida, *Miller* 283
„ *serotina*, Loudon 285
Rinzi, Roezl 321
robusta, Roezl 309
Rohani, Roezl 321
Romana, Hort. 240
Roylei, Lindley 243
rubescens, Roezl 321
rubra, Lambert 17
rubra, Michaux 256
rubra, Siebold 233—241
„ *violacea*, Endlicher 18
rubræflora, Loudon 245
rudis, Endlicher 309
„ Roezl 319
Rumeliana, Roezl 320
rupestris, Michaux 230
Russelliana, *Lindley* 321
Sabina Coulteri, Loudon 266
Sabiniana, *Douglas* 284
„ *macrocarpa*, Hort. 266
„ *major*, Manetti 266
Salzmanni, Dunal 255
sanguinea, Lapeyrouse 245
San-Rafaeliana, Roezl 320
sativa, Bauhin 252
„ Amann 295
Schrenkiana, Antoine 18
Scotica, Willdenow 258
scoparia. Roezl 304
selenolepis, Parlatore 226
Serenagensis, Madden 275
serotina, *Michaux* 285
Shasta, Carrière 302
Sibirica, Steudel 221
Sibirica alba, Fischer 214
Sinclairi, Hooker 261
Sinensis, *Lambert* 286
Sitchensis, Bongard 12
Skinnerii, Forbes 301
Skinnerii, Hort. 316

PAGE
PINUS.
Smithiana, Lambert 19
Soulangeana, Roezl 320
sp. like Ayacahuite, Loudon 311
spectabilis, Lambert 226
spinosa, Roezl 320
St. Helenica, Loudon 249
Standishi, Roezl 304
striata, Hamilton 226
stricta, Hort. 240
strobiliformis, Wislizenus 292
Strobus, *Linnæus* 322
„ Hamilton 299
„ Thunberg 306
„ *alba*, Loudon 324
„ brevifolia, *Booth* 323
„ compacta, *Hort.* 427
„ *compressa*, Loddiges 323
„ *excelsa*, Loudon 299
„ *Monticola*, Nuttall 314
„ *Nepalensis*, Hort. 299
„ nana, *Knight* 323
„ nivea, *Knight* 324
„ *pumila*, Hort. 323
„ *tabuliformis*, Hort. 323
„ *umbraculifera*, Hort 323
subpatula, Roezl 278
Sudeticus, Ungrische 253
suffruticosa, Roezl 304
Sumatrana, Mirbel 111
„ Junghu 242
Sylvestris, Thunberg 241
Sylvestris, Linnæus 257
„ Altaica, *Ledebour* 259
„ *altera*, Dodon 295
„ argentea, *Steven* 260
„ *brevifolia*, Link 245
„ *Cembra*, Matthioli 295
„ *divaricata*, Aiton 230
„ *Escarena*, Pinet-Woburn 257
„ *Genevensis*, Bauhin 257
„ *Haguenensis*, Loudon 257
„ *hamata*, Steven 260
„ horizontalis, *Don* 258
„ *humilis*, Link. 245
„ latifolia, *Gordon*. 259
„ monophylla, *Hodgens* 259

PAGE

PINUS.
Sylvestris *montana*, Aiton. 253
„ „ Hort... 258
„ *Mugho*, Bauhin... 244
„ nana, *Hort* 259
„ *Persica*, Hort. ... 259
„ *pygmæa*, Hort. ... 259
„ *Rigensis*, Fischer 257
„ *rotundata*, Link. 245
„ *rubra*, Grigor ... 258
„ *uncinata*, Don ... 257
„ *Uralensis*, Fischer 259
„ *scariosa*, Loddiges 257
„ *squamosa*, Bosc... 257
„ variegata, *Hort*... 259
„ *vulgaris*, Clusius. 257
Syrtica, Thore 249
tabulæformis, Fortune ... 241
Tæda, *Linnæus* 286
„ *alopecuroides*, Aiton 285
„ *rigida*, Aiton 283
„ *variabilis*, Michaux. 243
Tatarica, Miller 253
Taurica, Hort. 247
taxifolia, Lambert 24
Tchugatskoi, Fischer 214
Tenangenensis, Roezl 320
tenuifolia, *Bentham* 324
Teocote, *Schiede* 287
tetragona, Mœnch 3
Thelemanni, Roezl 320
Thibaudiana, Roezl 298
Thunbergii, Parlatore...... 241
Timorensis, Loudon 271
tinctoria, Wallich 226
Thamacaensis, Roezl 304
Tomacocaensis, Roezl...... 320
Torreyana, Parry 310
Troubezkoiana, Roezl...... 321
Tsuga, Antoine 32
tuberculata, *Don*............ 288
tumida, Roezl 287
turbinata, Bosc. 232
Tzompoliana, Roezl 278
uncinata, Raymond 244
„ Widdrington ... 245
valida, Roezl 301
Van-Geerti, Roezl 301
Van-Houttei, Roezl......... 320
variabilis, Pursh 243
„ Lambert 238
Veitchi, Roezl 294
venusta, Douglas 202

PAGE

PINUS.
verrucosa, Roezl 308
Verschaffelti, Roezl 325
verticillata, Siebold......... 376
Vilmorini, Roezl............ 287
Virginiana, Miller 238
„ *tenuifolia*, Plukenet 286
Webbiana, Wallich......... 226
Wilsoni, Roezl............... 313
Wincesteriana, *Gordon* ... 325
Wincesteriana, Hort 325
Zacatlana, Roezl............ 290
Zamoraensis, Roezl......... 301
Zitacuaria, Roezl 298
Platycladus
dolabrata, Spach 398
stricta, Spach 50
PODOCARPUS, *L'Heritier*.. 326
affinis, *Seemann* 326
agathifolia, Blume 186
Alpina, *Hooker* 351
„ *Lawrenciana*, Parlatore............ 353
amara, *Blume* 327
Andina, *Pœppig* 351
angustifolia, *Parlatore* ... 327
Antarctica, Van Houtte... 332
Antillarum, R. Brown ... 331
aristulata, *Parlatore* 328
asplenifolia, Labillardier. 194
Beccarii, Parlatore 186
Bidwilli, Hoibrenk......... 350
bifrons, Endlicher 104
Blumei, Endlicher 186
bracteata, *Blume* 328
„ brevipes, *Blume* 329
Chileana, Lechler 344
Chilina, *Richard*............ 329
Chinensis, *Wallich*......... 330
„ argentea, *Gordon* 331
„ aurea, *Gordon* ... 331
coriacea, *Richard* 331
Coreana, Van Houtte...... 411
corrugata, *Gordon* 332
Cumingii, *Parlatore* 357
cupressina, *R. Brown*...... 356
curvifolia, *Carrière* 332
cuspidata, Endlicher 187
dacrydioides, *Richard* ... 357
discolor, *Blume* 333
Drouyniana, *Mueller* 333
drupacea, Hort. 67

PAGE
PODOCARPUS.
dulcamara, Seemann 327
elata, *R. Brown* 334
elongata, *Heritier* 334
elongata, Meyer 341
Endlicheriana, *Carrière*.. 335
ensifolia, *R. Brown* 335
eurhyncha, *Miquel* 336
excelsa, Loddiges 347
falcata, *R. Brown* 336
falciformis, *Parlatore* ... 336
ferruginea, *Don* 352
glomerata, *Don* 337
grandifolia, *Endlicher* ... 187
Horsfieldii, Wallich 356
Humboldtii, Hort 332
Humboldtii, Hort 355
imbricata, Blume 356
Jamaicensis, Hort. 345
Japonica, *Siebold* 337
„ elegantissima, *Hort.* 337
Junghuhniana, Miquel ... 342
Koraiana, *Siebold* 338
læta, *Hoibrenk*.............. 338
Lamberti, *Klotzsch* 339
lanceolata, Hort. 337
latifolia, Wallich 189
latifolia, Blume 186
latifolia, R. Brown......... 349
Lawrencii, *Hooker* 353
leptostachya, *Blume* 339
linearis, Van Houtte 334
longifolia, Hort. 340
macrophylla, Wallich ... 343
macrophylla, *Don* 340
macrophylla, Maki Endlich 330
macrostachya, *Parlatore* . 341
Makayi, Lawson........... 330
Maki, Siebold 330
Makoya, Pinet Woburn... 330
Makoyi, Hort. 330
Mannii, *Hooker* 341
Meyeriana, *Endlicher*...... 341
minor, Parlatore 190
Miquelia, Hort. 330
montana, Loddiges......... 355
mucronata, Hort............ 334
Nageia, R. Brown 188
neglecta, *Blume* 342
neriifolia, *R. Brown* 343
nivalis, *Hooker* 353
nobilis, Hort.................. 335

PAGE
PODOCARPUS.
Novæ Caledoniæ, *Vieillard* 343
nubicola, Makoy 344
nubigæna, *Lindley* 344
nucifera, Persoon 411
oleifolia, *Don* 344
parvifolia, *Parlatore* 345
pinnata, Hort................ 189
polystachya, *R. Brown* ... 345
pruinosa, *Zeyher*........... 334
pungens, Don 347
„ Van Houtte......... 350
Purdieana, *Hooker* 345
„ *parvifolia*, Grisebeck 328
rigida, Klotzsch 337
rivularis, Pancher 343
Rumphii, *Blume* 346
salicifolia, *Klotzsch* 347
saligna, Don.................. 329
Sellowii, *Klotzsch*........... 347
spicata, *Brown*.............. 354
spicata, Pœppig 351
spinulosa, *R. Brown* 347
spinulosa, Makoy........... 350
Sprucei, *Parlatore* 348
taxifolia, *Humboldt*......... 355
taxifolia densifolia, *Kunth* 355
taxodioides, Carrière 107
tenuifolia, *Parlatore* 359
Teysmanni, *Miquel*......... 348
thevetiæfolia, *Blume* 349
thuioides, R. Brown 357
Thunbergii, *Hooker* 349
Totara, *Don* 350
usta, *Brongniart* 358
verticillata, Hort. 340
Vieillardii, *Parlatore* 359
Vriesiana, Hort. 330
Yacca, Don 331
zamiæfolia, Richard 108
„ Hort. Belg............. 189
Prumnopitys
elegans, Philippi 351
PSEUDO-LARIX, *Gordon* ... 360
Kæmpferi, *Gordon* 360
Quadrifaria
imbricata, Manetti 39
RETINOSPORA, *Siebold* ... 362
decussata, Hort. 364
dubia, Makoy 364
Elwangeriana, *Barry*...... 362
ericoides, *Zuccarini* 363

PAGE

- RETINOSPORA.
  - filicoides, *Veitch* ... 363
  - filifera, *Standish* ... 364
    - „ *gracilis*, Hort. ... 427
  - *Fusinoki*, Zuccarini ... 367
  - juniperoides, *Carrière* ... 364
  - leptoclada, *Zuccarini* ... 365
  - lycopodioides, *Standish* ... 366
  - *monstrosa*, Hort. ... 366
  - obtusa, *Siebold* ... 367
    - „ alba spica, *Barron* ... 427
    - „ argentea, *Fortune* ... 368
    - „ aurea, *Fortune* ... 368
    - „ compacta, *Hort.* ... 368
    - „ *filicoides*, Hort. ... 363
    - „ gracilis aurea, *Veitch* 428
    - „ Keteleeri, *Standish* 368
    - „ *nana*, Hort. ... 369
    - „ nana aurea, *Veitch* ... 428
    - „ pygmæa, *Gordon* ... 369
  - pisifera, *Siebold* ... 369
    - „ aurea, *Hort* ... 370
    - „ erecta, *Hort* ... 428
    - „ gracilis, *Hort* ... 428
    - „ *plumosa*, Hort. ... 370
    - „ nana aurea, *Hort.* ... 428
  - plumosa, *Hort.* ... 370
    - „ alba variegata, *Hort.* 429
    - „ argentea, *Hort.* ... 371
    - „ aurea, *Hort.* ... 370
    - „ aurea variegata, *Hort.* 429
    - „ aurea pumila, *Hort.* 429
    - „ flavescens, *Cripps* ... 429
  - squarrosa, *Siebold* ... 371
    - „ *leptoclada*, Siebold . 365
    - „ variegata, *Siebold* ... 372
  - *stricta*, Hort. ... 428
  - tetragona, *Barron* ... 429
- SALISBURIA, *Smith* ... 373
  - adiantifolia, *Smith* ... 374
    - „ *laciniata*, Carrière ... 375
    - „ macrophylla, Hort. . 375
    - „ pendula, *Van Geert* . 375
    - „ variegata, *Carrière* . 375
  - *Billardierii*, Richard ... 194
  - *Ginkgo*, Salisbury ... 374
  - *macrophylla*, Regnier ... 375
- SAXE-GOTHÆA, *Lindley* ... 372
  - conspicua, *Lindley* ... 372
  - *gracilis*, Hort. ... 344
- *Schubertia Capensis*, Sprengel. 418
  - *disticha*, Mirbel ... 382

PAGE

- *Schubertia, disticha, imbricata*, Spach ... 383
  - *Japonica*, Spach ... 126
  - *sempervirens*, Spach ... 379
  - *nucifera*, Denhardt ... 126
- SCIADOPITYS verticillata, *Siebold* ... 376
  - verticillata variegata, *Fortune* ... 378
- SEQUOIA, *Endlicher* ... 379
  - *gigantea*, Endlicher ... 415
  - sempervirens, *Endlicher* . 379
    - „ glauca, *Hort.* ... 381
    - „ Lawsoniana, *Hort.* 430
  - *Wellingtonia*, Seemann ... 415
- *Taxodii, Sp.*, Douglas ... 415
- TAXODIUM, *Richard* ... 381
  - *adscendens*, Brongniart ... 383
  - *Capensis*, Hort. ... 418
  - distichum, *Richard* ... 383
    - „ denudatum, *Hort.* . 382
    - „ *excelsum*, Booth ... 384
    - „ fastigiatum, *Knight* 383
    - „ Mexicanum, *Gordon* 384
    - „ *microphyllum*, Spach 384
    - „ nanum, *Carrière* ... 384
    - „ *nigrum*, Hort. ... 382
    - „ *nutans*, Loudon ... 385
    - „ *patens*, Endlicher ... 382
    - „ *pendulum*, Loudon . 385
    - „ *pinnatum*, Hort. ... 384
    - „ *sempervirens*, Rinz . 384
    - „ *Sinensis*, Loudon ... 385
  - *fastigiata*, Hort. ... 383
  - *Horsfieldii*, Knight ... 356
  - *Hugeli*, Lawson ... 384
  - *Japonicum*, Denhardt ... 126
  - *Japonicum*, Brongniart ... 74
    - „ *héterophyllum*, Brongniart. 126
  - *juniperoides*, Hort. ... 418
  - *Mexicanum*, Carrière ... 384
  - microphyllum, *Brongniart* 384
  - *Montezumæ*, Dunal ... 384
  - *mucronatum*, Tenore ... 384
  - *nuciferum*, Brongniart ... 126
  - *Nutkaensis*, Lambert ... 379
  - *pinnatum*, Hort. ... 384
  - *sempervirens*, Lambert ... 379
    - „ *albo spica*, Hort. ... 381
    - „ *glaucum*, Hort. ... 381
  - Sinensis, *Noisette* ... 385

PAGE
TAXODIUM.
Sinensis, *pendulum*, Forbes 385
virens, Knight 384
Washingtonianum, Winslow 415
TAXUS, *Linnæus* 386
adpressa, *Knight* 387
„ stricta, *Standish*. 387
baccata, Thunberg 67
baccata, *Linnæus* 388
„ *adpressa*, Carrière.. 387
„ *Americana*, Douglas 392
„ argentea, *Loudon*... 388
„ *Canadensis*, Loudon 393
„ Cheshuntensis, *W. Paul* 389
„ Dovastoni, *Loudon*. 389
„ „ variegata, *Hort*... 389
„ Elvastonensis, *Barron* 430
„ epacrioides, *W. Paul* 389
„ erecta, *Loudon* 389
„ „ Crowderi, *Hort*. 390
„ ericoides, *Hort*....... 390
„ fastigiata, *Loudon*.. 390
„ „ aurea variegata, *Fisher* 391
„ „ variegata, *Carrière* 390
„ *foliis variegatis*, Hort. 388
„ Foxii, *Hort*. 391
„ fructu-luteo, *Loudon* 391
„ glauca, *Carrière* ... 391
„ *Hibernica*, Hort. ... 390
„ „ *variegata*, Hort.... 390
„ *horizontalis*, Hort.. 389
„ *Indica*, Madden ... 396
„ Jacksonii, *W. Paul* 391
„ *Jackson's Weeping Yew* 391
„ *Mexicana*, Hartweg 395
„ *microphylla*, Hort.. 390
„ *minor*, Michaux ... 393
„ *monstrosa*, Hort. ... 392
„ *nana*, Hort. 391
„ nana, *W. Paul*...... 392
„ Nidpathensis, *W. Paul* 392
„ *nigra*, W. Paul...... 391
„ recurvata, *Carrière*. 392

PAGE
TAXUS.
baccata sparsifolia, *Loudon* 392
„ *sub-glaucescens*, Jacques 391
„ variegata, *Loudon*... 392
„ *variegata*, Barron 430
„ „ *aurea*, Carrière...... 392
„ „ *alba*, Carrière...... 388
„ *vulgaris*, Endlicher 388
Boursieri, Carrière 392
brevifolia, *Nuttall* 392
brevifolia, Hort. 387
Canadensis, *Willdenow* ... 393
„ *major*, Knight ... 393
„ variegata, *Hort*.. 430
„ Washingtonii, *Hort*. 394
Capensis, Lamarck 334
Chinensis, Roxburgh 330
coriacea, Hort................ 67
cuspidata, *Siebold* 394
Dovastoni, Hort. 389
elegantissima, Hort. 388
elongata, Solander ...., 334
empetrifolia, Hort. 390
erecta, Hort.................... 389
ericoides, Hort................ 390
falcata, Thunberg 336
fastigiata, Lindley 390
„ *argentea*, Knight 390
Fortunei, Hort. 338
Foxii, Hort..................... 391
globosa, *Schlectendal* 395
Harringtoni, Loudon...... 69
Hibernica, Hooker 390
Inukaja, Knight 69
Japonica, Hooker 67
Japonica, Loddiges 338
Lambertiana, Wallich ... 222
latifolia, Thunberg 349
Lindleyana, Murray 392
longifolia, Hort. 340
macrophylla, Thunberg ... 340
Makoya, Hort................ 330
marginata, Hort............ 388
microphylla, Hort. 390
Mitchelli, Hort. 392
monstrosa, Hort. 392
Montana, Nuttall 412
Montana, Willdenow 355
„ *var.*, Willdenow. 355

PAGE
TAXUS.
nucifera, Royle 396
nucifera, Thunberg......... 411
Occidentalis, Nuttall 392
Patagonica, Hort. 372
pendula, Hort................ 389
procumbens, Loddiges ... 393
pyramidalis, Hort.......... 390
pyramidalis, Knight 389
recurvata, Lawson 392
serratifolia, Noisette 194
Sinensis, Knight 69
„ *tardiva*, Knight... 387
spicata, Dombey 351
spinulosa, Smith 347
stricta, Hort. 389
tardiva, Lawson 387
tenuifolia, Wickstræm ... 331
umbraculifera, Hort. 389
verticillata, Thunberg...... 376
virgata, Wallich 396
Wallichiana, *Zuccarini* ... 396
Washingtoni, Hort.......... 394
Thalamia asplenifolia, Sprengel 194
cupressina, Sprengel 104
Thuiœcarpus juniperinus, Trautv. 137
THUIOPSIS, *Siebold* 398
Borealis, Fischer 94
dolabrata, *Siebold* 398
„ *lœtevirens*, Hort. ... 399
„ nana, *Siebold* 399
„ variegata, *Fortune* . 400
lœtevirens, Lindley 399
Standishi, Gordon 408
Tchugatskoyœ, Carrière ... 94
THUJA, *Linnœus* 400
acuta, Mœnch 50
Andina, Pœppig 180
Antarctica, Hort............. 401
aphylla, Burmann 417
argentea, Hort. 51
articulata, Wahlenberg ... 58
aurea, Waterer 51
Australis, Hort. 409
Australis, Poiret 117
Caucasica, Hort............. 404
Chilensis, Don............... 180
compacta aurea, Hort...... 51
cuneata, Dombey............ 180
cupressoides, Linnæus...... 417
Craigiana, Jeffrey 181

PAGE
THUJA.
Craigiana, glauca, Lawson 181
dolabrata, Thunberg 398
Doniana, Hooker 182
Douglasii, Nuttall 402
dumosa, *Gordon* 401
Elwangeriana, Hort. 362
ericoides, Hort. 364
elegantissima, Hort. 53
excelsa, Brongniart 94
falcata, Hort. 54
filiformis, Loddiges......... 55
flagelliformis, Hort......... 406
freneloides, Hort............. 52
funiculata, Hort............. 52
gigantea, *Nuttall*........... 402
gigantea, Hort. 181
„ autrovirens, *Hort*.... 430
„ erecta, *R. Smith* ... 403
„ pumila, *Hort*......... 431
„ *Standishi*, Parlatore. 408
„ variegata, *Hort*...... 403
glauca, Hort.................. 52
Hoveyi, Hort. 405
hybrida, Hort. 57, 362
inœqualis, Desfontain...... 117
Japonica, Hort. 53
„ Maximowicz 408
lineata, Poiret 126
„ *lavandulœfolia*, Poiret 126
Lobbii, Veitch 402
„ *atrovirens*, Smith ... 430
„ *diffusa*, Smith 431
„ *erecta*, Hort 403
„ *pumila*, Smith 431
„ *variegata*, Hort...... 403
Lobbiana, Hort. 402
Meldensis, *French Gardens* 57
Menziesii, Douglas 402
monstrosa, Hort. 52
minor, W. Paul 401
nana, Hort................... 53
nana, Hort................... 401
„ *aurea*, Hort. 51
Nepalensis, Hort............ 52
Nuttalliana, Douglas...... 181
obtusa, Mœnch 403
Occidentalis, *Linnœus* ... 403
„ alba, *Maxwell*......... 431
„ argentea, *Carrière*... 404
„ *asplenifolia*, Hort... 406

PAGE
THUJA.
Occidentalis aurea, *Maxwell* 431
„ *compacta*, Standish . 404
„ „ Knight ... 406
„ compacta, *R. Smith* 404
„ cristata, *Cripps* 404
„ densa, *Gordon* 404
„ *dumosa*, Hort. 401
„ *ericoides*, Hort. 362
„ globosa, *Hort.* 405
„ gracilis, *Scott* 431
„ Hoveyi, *Hort.* 405
„ *nana*, Hort. 401
„ *plicata*, Loudon...... 406
„ pendula, *Gordon* ... 405
„ variegata, *Loudon*... 406
„ Vervaeneana, *Hort.* 406
„ Walthamensis, Paul. 406
„ *Wareana*, Knight ... 409
odorata, Marsh 406
Orientalis, Linnæus 50
„ *aurea nana*, Hort... 51
„ *compacta*, Hort...... 53
„ *cupressoides*, Cels.... 55
„ *flagelliformis*, Jacques 55
„ *Sieboldii*, Endlicher 53
„ *Tatarica*, Lawson... 409
pendula, Lambert 55
pendulata, Hort............ 55
pensilis, Staunton 126
plicata, *Donn* 406
„ Lambert 402
„ *dumosa*, Hort......... 401
„ *Llaveana*, Hort...... 401
„ *minima*, R. Smith... 408
„ *pendula*, Hort. 431
„ variegata, Hort...... 407
prostrata, Hort. 401
pygmæa, Veitch 369
„ Hort..................... 401
pyramidalis, Tenore 409
quadrangularis, Ventenat 417
recurvata nana, Hort...... 401
Sibirica, Linnæus 409
„ *compacta*, Knight ... 409
„ *monstrosa*, Knight... 52
„ *Wareana*, Hort...... 409
sphæroidalis, Richard...... 71

PAGE
THUJA.
sphæroidea, Hort 71
„ *nana*, Hort...... 73
„ *variegata*, Hort. 72
Standishi, *Gordon* 408
stricta, Hort.................. 53
Tatarica, *Loddiges* 409
„ *Wareana*, Hort...... 409
tetragona, Hooker 183
Theophrasti, Bauhin 403
variegata, Marsh 406
„ Hort............... 51
Vervaeneana, Van Geert 406
Wareana, Booth 406
„ Hort................... 409
„ *variegata*, Hort ... 407
TORREYA, *Arnott* 410
Californica, *Torrey*......... 410
grandis, Fortune............ 70
Humboldti, Knight......... 355
Montana, Hort. 412
myristica, Hooker 410
nucifera, *Zuccarini*......... 411
taxifolia, *Arnott* 412
Tsuga Brunoniana, Carrière 21
Canadensis, Carrière 22
„ *nana*, Carrière . 23
Douglasii, Carrière......... 24
Hookeriana, Carrière...... 30
Lindleyana, Roezl 25
Mertensiana, Carrière ... 29
Sieboldii, Carrière 32
Washingtonia gigantea, of the Americans 415
Californica, Winslow...... 415
WELLINGTONIA, *Lindley* . 414
gigantea, *Lindley*............ 415
gigantea variegata, *Hort.* 416
gigantea aurea variegata, *Hartland** ....
WIDDRINGTONIA, *Endlicher* 416
Commersonii, *Endlicher* . 417
cupressoides, *Endlicher*... 417
ericoides, Knight............ 363
glauca, Carrière 417
juniperoides, *Endlicher*... 418
Natalensis, *Endlicher*...... 419
Wallichii, *Endlicher* 419

---

* This variety, which should have been described at page 416, is very fine and constant; about a third of the branchlets are of a *pale golden yellow* when they first appear, after which they gradually change to a delicate and permanent *straw colour*. It was raised by Mr. R. Hartland of the Lough Nurseries, Cork, and is one of the finest variegated Conifers which we at present possess.

INDEX OF POPULAR NAMES.

ENGLISH AND FOREIGN.

Including Chinese, Japanese, Indian, American, Russian, German, Swedish, Polish, Hungarian, Dutch, Flemish, French, Italian, and Spanish.

COMPILED BY HENRY G. BOHN, F.L.S., F.R.H.S., F.R.G.S.

⁂ The names between brackets are translations of Chinese, Japanese, and other Terms. The names printed in *Italics* indicate Localities or Languages.

PAGE

Abeto. *Italian.* Picea pectinata. Common Silver Fir. - - 209

Abyssinian Juniper. *Abyssinia.* Juniperus procera - - 162

Acuminate Swan River Cypress. Actinostrobus Acuminatum - 34

Adventure-Bay Pine. *Tasmania.* Phyllocladus rhomboidalis - 194

African or Atlantic Cedar. *Atlas Range N. Africa.* Cedrus Atlantica - - - - - - - - 60

African Cypress. *Madagascar, etc.* Widdringtonia - - 416

Agath-Tanne. *German.* Dammara Orientalis. Amboyna Pine 111

Agrion Elaton. (Wild Fir.) *Cephalonia.* Picea Apollinis. Mount Enos Fir - - - - - - 197

Aka-Matsu, (Red Pine.) *Japan.* Pinus densiflora. Dense-flowered Japan Pine - - - - - - 233

Ak-cherschal. *Tartary.* Picea Pichta. Siberian Silver Fir - 221

Alcock Spruce. *Japan.* Abies Alcocquiana - - - 4

Aleppo or Jerusalem Pine. *Sicily and Greece.* Pinus Halepensis - - - - - - - 236

Alerce. *Barbary.* Callitris quadrivalvis. Jointed Arbor-vitæ - 58

Alerse. *Spanish.* Pinus Larix. The Larch - - - 168

Alerze. *Chili and the Cordilleras.* Libocedrus tetragona. Tetragonal Arbor-Vitæ - - - - - 183

Alpine Fir. Pinus Dumosa or Abies Brunoniana - - 21

Altaian Larch. Larix Ledebourii - - - - 173

PAGE

Alvies. *Swiss.* Pinus Cembra. Swiss Stone Pine 295

Amboyna Pine or Pitch Tree. Dammara Orientalis 111

American Arbor-vitæ. *Canada.* Thuja Occidentalis 403

American Larch, the Black. Larix pendula 177

American Silver Fir. *North America.* Picea Balsamea 200

American Spruce Fir, Black. Abies Nigra 13

American Yellow Pine. *New Jersey.* Pinus mitis 243

Amerikansche Treur-Larix. *Dutch.* Larix Europæa pendula. Godsall's Weeping Larch 170

Anunder. *Himalaya.* Pinus longifolia. Long-leaved Pine 275

Aphernousli. *Rhætian Alps.* Pinus Cembra. Swiss Stone Pine 295

Aprofenyo. *Hungarian.* Juniperus communis. Common Juniper 131

Aralla. *Savoy.* Pinus Cembra. Swiss Stone Pine 295

Arar. *Roman.* Cedrus. The Cedar 59

Araragi (Yew-like). *Japan.* Abies Tsuga. Japan Hemlock Spruce 32

Araragii. *Japan.* Taxus cuspidata. Abrupt-pointed Yew 394

Araz. *Hebrew.* Cedrus. Cedar 59

Araza. *Roman.* Cedrus. Cedar 59

Arbor Vitæ (Tree of Life). *North America.* Thuja Occidentalis 400 & 405

Arbre aux quarante ecus. *French.* Salisburia adiantifolia. Maiden-hair tree 374

Arbre de Vie. *French.* Arbor Vitæ. Thuja Occidentalis. American Arbor Vitæ 400

Arbre de Vie á large feuilles. *French.* Thujopsis dolabrata 398

Archangel Larch. *Russia.* Larix Ledebourii 173

Arctic Spruce Fir. Abies rubra 17

Arditsch. *Turkish.* Juniperus communis. Common Juniper 131

Aroo. *Nepaul.* Juniperus recurva. Drooping Indian Juniper 147

Ars. *Russian.* Juniperus Davurica. Daurian Juniper 141

Arth. *Northern Italy.* Pinus Cembra. Swiss Stone Pine 295

Artsh. *Russian.* Juniperus Sabina. Common Savin 150

Arve or Arvel. *German.* Pinus Cembra. Swiss Stone Pine 295

Arz. *Arabic.* Cedrus. Cedar 59

Asufi. *Japan.* Thuiopsis dolabrata. Hatchet-leaved Arbor Vitæ 398

Asu-naro (white underneath). *Japan.* Thuiopsis dolabrata. Hatchet-leaved Arbor Vitæ 398

Australian Frenela. Frenela Australis 117

Austrian Pine. *Lower Austria.* Pinus Austriaca 229

Auvier. *French.* Pinus Cembra. Swiss Stone Pine 295

PAGE

Ayacahuite. *Mexico.* Pinus Ayacahuite, *also* Loudoniana, Loudon's Pine - - - - - 292 & 311

Ayewen. *Java.* Podocarpus bracteata. Bracteated Podocarpus 328

Azores Juniper. Juniperus Cedrus brevifolia - - - 130

Bald Cypress. *Carolina.* Taxodium distichum. Deciduous Cypress - - - - - - - 382

Balfour's Pine. *California.* Pinus Balfouriana - - - 293

Balm of Gilead Fir. *North America.* Picea balsamea - 200

Balsems-par. *Dutch.* Picea Balsamea. Balm of Gilead Fir - 200

Banya-Tanya or Banza-tunza. *Australia.* Araucaria Bidwillii. Bidwill's Araucaria - - - - - - 36

Bastard Cedar. *California.* Sequoia sempervirens. Californian Redwood - - - - - - - 379

Beetur, Betr, or Better. *Himalaya.* Juniperus densa. Bushy Indian Juniper - - - - - - 141

Bergen-Reus (Giant of the Forest). *Dutch.* Wellingtonia gigantea. Mammoth Tree - - - - - 415

Besenkiefer. *German.* Pinus Australis. Southern or Swamp Pine - - - - - - - - 260

Betze. *Lapland.* Pinus Sylvestris. Scotch Fir - - - 257

Bhedara or Bindhara. *Nepaul.* Juniperus squamata. Scaly-leaved Nepaul Juniper - - - - - - 152

Bhotan Pine. *Nepaul.* Pinus excelsa. Lofty Bhotan Pine - 299

Biakkusi. *Japan.* Juniperus Chinensis. Chinese Juniper - 158

Biegsame Arve. *German.* Pinus flexilis. Pliable-branched Pine 302

Bischops-Kiefer. *German.* Pinus muricata. Bishop's Pine - 246

Bishop's Pine. *California.* Pinus Muricata - - - 246

Black Austrian Pine. *Lower Austria.* Pinus Austriaca - 229

Black Cypress. *America.* Taxodium distichum. Deciduous Cypress - - - - - - - 382

Black Fir. *Bhotan.* Picea Webbiana. Webb's Indian Fir - 227

Black Larch. *Canada, etc.* Larix pendula. Black American Larch - - - - - - - 177

Black Pine. *China.* Pinus Massoniana. Masson's Japan Pine 241

Black Spruce Fir. *North America.* Abies nigra - - 13

Bramhi. *India.* Taxus baccata. Common Yew - - - 388

Brazil Pine. Araucaria Brasiliensis. Brasil Araucaria - - 37

Brisk or Brusc. *Norwegian.* Juniperus communis. Common Juniper - - - - - - - 131

Brissoneuse. *French.* Abies Brunoniana. Indian Hemlock Spruce - - - - - - - 21

PAGE

Broom Pine. *America.* Pinus Australis. Southern or Swamp Pine - 260
Bull Pine. *America.* Pinus ponderosa. Heavy-wooded Pine - 281
Buonaparte's Pine. *Mexico.* Pinus Buonapartea - 294
Cade. *French.* Juniperus Cedrus. Canary Island Juniper - 129
Caju Meddambula. *Borneo.* Nageia Beccarii. Beccari's Borneo Nagi - 186
Calabrian Cluster Pine. Pinus Brutia - 232
Californian Fir. Abies Pattoniana. Patton's Californian Fir - 30
Californian Hemlock Spruce. Abies Mertensiana - 29
Californian Mammoth Tree. Wellingtonia gigantea - 415
Californian Mountain Pine. Pinus monticola - 314
Californische Bergkiefer. *German.* Pinus monticola. Mountain Pine - 314
Canadian or North American Yew. Taxus Canadensis - 393
Canadian Balsam, or Balm of Gilead Fir. Picea balsamea - 200
Canary Island Pine. Pinus Canariensis - 264
Candle-wood. *Mexico.* Pinus Teocote *also* Leiophylla. Smooth-leaved Mexican Pine - 287—308
Carpet or Prostrate Juniper. *America.* Juniperus prostrata. Prostrate-branched Juniper - 146
Casazkaja. *Russian.* Juniperus Sabina. Common Savin - 150
Cedar of Goa. Cupressus Lusitanica - 89
Cedar of Lebanon. *Mount Lebanon.* Cedrus Libani - 65
Cedar, the Japan. Cryptomeria Japonica. Japan Cedar - 74
Cedar, the White. Chamæcyparis. White Cedar - 70
Cedar-Boom or Broom. *Cape of Good Hope.* Widdringtonia Juniperoides - 418
Ceder, Indische. *Dutch.* Cedrus Deodara. Indian Cedar - 61
Ceder von Goa. *German.* Cupressus Lusitanica. Cedar of Goa 89
Cedre de l'Inde. *French.* Cedrus Deodara. Deodar, or Indian Cedar - 61
Cedre du Liban ou Cedrelate. *French.* Cedrus Libani. Cedar of Lebanon - 65
Cedro. *Mexico.* Juniperus Cedrus brevifolia, The Azores Juniper. *also* Juniperus Mexicana, Mexican Sandarac Juniper 130 & 161
Celery-topped Pine. *Tasmania.* Phyllocladus Rhomboidalis - 194
Cembra, or Swiss Stone Pine. Pinus Cembra - 295
Cembrot. *French.* Pinus Cembra. Swiss Stone Pine - 295
Chadsura (green and white). *Mongolia.* Picea Cilicica. Cilician Silver Fir - 214

PAGE

CHANGATHASI-DHOOP. *Nepaul.* Manse Tree. Abies Brunoniana. Indian Hemlock Spruce - - - - - 21

CHATOONG. *Cashmere.* Red Dye. Taxus Wallichiana. Wallich's Yew - - - - - - - - 396

CHEECHIA. *Himalaya.* Juniperus densa. Bushy Indian Juniper 141

CHEEL, CHEER, or CHIR. *Himalaya.* Pinus longifolia. Long-leaved Pine - - - - - - - - 275

CHILI ARBOR VITÆ. Libocedrus Chilensis - - - - 180

CHILI PINE. *Chilian Andes.* Araucaria Imbricata. Monkey Puzzle - - - - - - - 39

CHILROW. *Northern Himalayas.* Picea Webbiana. Webb's Indian Fir - - - - - - - 226

CHINESE ARBOR VITÆ. Biota Orientalis - - - - 50

CHINESE PINE. Pinus Sinensis - - - - - 286

CHINESE JUNIPER. Juniperus Chinensis - - - - 158

CHINESE WATER PINE. Glyptostrobus heterophyllus - - 126

CHOMORO. *Java.* Podocarpus Cupressina. Cypress-like Podocarpus - - - - - - - 357

CHOPKA. *Bhotan.* Juniperus Religiosa. Pencil or Incense Juniper 149

CHRISTIANA DEAL. Pinus Sylvestris. Scotch Fir - - 257

CHRISTMAS TREE. Abies excelsa communis. Common Norway Spruce - - - - - - - 6

CHURPINJA. *Bhotan.* Juniperus densa. Bushy Indian Juniper 141

CIPRESBOOM. *Dutch.* Cypress Tree - - - - 78

CLUSTER-FLOWERED YEW. *China and Japan.* Cephalotaxus - 66

CLUSTER PINE. *Italy, Spain, etc.* Pinus Pinaster. Star Pine - 249

CORSICAN or CALABRIAN PINE. *Corsica.* Pinus Laricio - - 239

CORTEAN PINE. *Corsica.* Pinus Pinaster minor - - - 251

COWRIE. *New Zealand.* Dammara Australis. Kauri Pine, or New Zealand Pitch Tree - - - - - 109

CRACOW JUNIPER. Juniperus communis Cracovia - - - 132

CREEPING CEDAR or JUNIPER. *Nepaul.* Juniperus squamata. Scaly-leaved Nepaul Juniper - - - - 152

CUPRESSINEES. *French term for* Cypresses, Taxodiums, Actinostrobus, Thujas, etc. - - - - - - 78

CURI. *Brazil.* Araucaria Brasiliensis. Brazil Araucaria - 37

CYPRES. *French.* Cypress - - - - - - 78

CYPRES FUNÈBRE OU PLEUREUR. *French.* Cupressus funebris. Weeping or Funeral Cypress - - - - 82

CYPRESS, DECIDUOUS. *N. America, Virginia, etc.* Taxodium distichum - - - - - - - 382

PAGE
CYPRESS, THE NATIVE. *Van Diemen's Land.* Frenela Gunnii Gunn's Frenela - - - - - - 120
CYPRESSEN. *German.* Cupressineæ. True Cypresses - - 78
CYPRESSES, THE TRUE. Cupressineæ - - - - 78—102
DAMMAR. *Malay.* Dammara Orientalis. Amboyna Pine - 111
DAMMAR, *or* PUTI, *or* BATU. *Malay.* Dammara - - - 108
DECKBLÆTTERIGE WEISSTANNE. *German.* Picea bracteata. Leafy-bracted Silver Fir - - - - - - 202
DEN, or DENNENBOOM. *Dutch.* Pinaceæ. Fir or Pine Tree - xi
DEODAR (TREE OF GOD). *Himalaya.* Cedrus Deodara. Himalayan Pine, also called Indian Cedar - - - - 61
DERVA, DEVADARU, DEWAR, etc. Cedrus Deodara. Indian Cedar 61
DHEYRI. *Nepaul.* Taxus Wallichiana. Wallich's Yew - - 396
DHOOP. *Nepaul.* Incense Juniper. Juniperus Religiosa. Pencil or Incense Juniper - - - - - - 148
DICHTBLÆTTERIGE KIEFER. *German.* Pinus densiflora. Dense-flowered Japan Pine- - - - - - 233
DIGGER PINE. *California.* Pinus Sabiniana. Sabine's Pine - 284
DIUM, or RIUM. *New Zealand.* Native Spruce. Dacrydium Cupressinum. Cypress-like Dacrydium - - - 104
DOUBLE-BALSAM FIR. *N. America.* Picea Fraseri. Fraser's Silver Fir - - - - - - - - 205
DOUBLE SPRUCE. *Canada.* Abies nigra. Black Spruce Fir - 13
DOUGLAS FIR. *California.* Abies Douglasii - - - 24
DRIEBLADIGE LAGE DEN. *Dutch.* Pinus inops. New Jersey Pine 238
DRUESIGE CYPRESSE. *German.* Cupressus Macnabiana. MacNab's Cypress - - - - - - 90
DUEN-NADELIGE KIEFER. *German.* Pinus tenuifolia. Slender-leaved Pine - - - - - - - 324
DUEN-NÆSTIGE CYPRESSE. *German.* Cupressus attenuata. Attenuated-branchletted Cypress - - - - - 79
DWARF CEMBRA PINE. *Siberia.* Pinus Cembra pygmæa - - 297
DWARF CONICAL COMMON SPRUCE. Abies excelsa stricta - 11
DWARF CORSICAN PINE. Pinus Laricio pygmæa - - - 240
DWARF CYPRESS. Cupressus Lawsoniana nana. Lawson's Cypress - - - - - - - - 88
DWARF GOLDEN ARBOR VITÆ. Biota Orientalis aurea - - 50
DWARF HATCHET-LEAVED ARBOR VITÆ. Thuiopsis dolabrata nana - - - - - - - 399
DWARF JAPAN CEDAR. Cryptomeria Japonica nana - - 76
DWARF JAPAN CYPRESS. Retinospora obtusa nana - - 428
DWARF JAPAN GOLDEN CYPRESS. Retinospora obtusa nana aurea 428

PAGE
DWARF JUNIPER. *Portugal.* Juniperus nana - - - 136
DWARF PINE. *Japan.* Pinus parviflora. Small-flowered Japan Pine - - - - - - - - 317
DWARF RED CEDAR. Juniperus Virginiana humilis - - 156
DWARF SAVIN JUNIPER. Juniperus Sabina nana - - - 150
DWARF SPRUCE. Abies excelsa Clanbrasiliana. Clanbrasil Spruce 7
DWARF WEYMOUTH PINE. *Canada.* Pinus Strobus nana - 323
DWARF WHITE SPRUCE. Abies alba nana - - - - 4
DWERG-BOOMPJE. *Dutch.* Biota Orientalis aurea. Dwarf Golden Arbor Vitæ - - - - - - - 50
DWERG-SPAR. *Dutch.* Picea Fraseri Hudsonica. Dwarf Silver Fir - - - - - - - - 206
EDELTANNE. *German.* Picea Pectinata. Common Silver Fir - 209
EDIBLE PINE NUT. Pinus Gerardiana. Gerard's Pine - - 268
EDLE KIEFER. *German.* Pinus Insignis. Remarkable Pine - 270
EDLE WEISSTANNE. *German.* Picea nobilis. Noble Silver Fir - 207
EIBE, or EIBENBAUM. *German.* Taxus baccata. Common Yew - 388
EMBOSSED CYPRESS. *China.* Glyptostrobus - - - 126
EMODI-KIEFER. *German.* Pinus longifolia. Long-leaved Pine - 275
EN. *Swedish.* Juniperus communis. Common Juniper - - 131
ENBÆVSTRÆD or ENBUSKE. *Swedish.* Juniperus communis. Common Juniper - - - - - - 131
ENEBRO. *Spanish.* Juniperus Cedrus. Canary Island Juniper - 129
EPICEA. *French.* Abies Excelsa. Common Norway Spruce, etc. - 6
EPINETTE Á LA BIÈRE. *French.* Abies nigra. Black or Double Spruce - - - - - - - 13
EPINETTE BLANCHE. *French.* Abies alba. White Spruce Fir - 3
EPINETTE ROUGE. *French.* Larix Microcarpa. Red American Larch - - - - - - - 175
ESSOYE. *Java.* Podocarpus bracteata. Bracteated Podocarpus - 328
EUPODOCARPES. *French.* The True Podocarps - - - 326
FADENBLÆTTERIGE KIEFER. *German.* Pinus filifolia. Thread-leaved Pine - - - - - - - 301
FALSE ARAUCARIA. *Australia.* Araucaria excelsa, etc. - - 43
FAUX-MELEZE. *French.* Pseudo-Larix Kæmpferi. Golden or Chinese Larch - - - - - - 360
FEEJEE ISLAND DAMMARA. Dammara Vitiensis - - - 113
FENYO GYALOG FENYO. *Hungarian.* Juniperus communis. Common Juniper - - - - - - 131
FEUCHT-TANNE. *German.* Abies excelsa. Common Norway Spruce - - - - - - - 6
FICHTE. *German.* Abies excelsa. Common Norway Spruce - 6

PAGE

Fi-Koja. Slender Yew. *Japan.* Torreya Nucifera. Nut-bearing Torreya - - - - - - - 411

Fime-gajo-Matsu. *Japan.* Dwarf five-leaved Pine. Pinus parviflora. Flowered Japan Pine - - - - 317

Fime Tsuga (Dwarf Yew-leaved Spruce). *Japan.* Abies Tsuga nana. Dwarf Tsuga Spruce - - - - 33

Fi-moro (Weeping or pendulous). *China.* Cupressus Corneyana. Corney's Chinese Cypress - - - - - 80

Fi-moro Hiba (Slender or drooping). *Japan.* Biota pendula. Weeping Arbor Vitæ - - - - - 55

Fi-noki. *Japan.* Dwarf, or compact tree or shrub. Biota Orientalis, etc. - - - - - - 50

Fi-noki-suga. *Japan.* Slender Evergreen. Juniperus Chinensis. Chinese Juniper - - - - - 158

Fir-tree. *Simla.* Abies Smithiana. Indian Spruce Fir - - 19

Fir Trees. Abietineæ, etc. - - - - - xi

Fi-Suga (Dwarf Evergreen). *China.* Cryptomeria Japonica nana. Dwarf Japan Cedar - - - - 76

Fitots-matsu (Single-leaved Pine). *Japan.* Pinus Massoniana. Masson's Japan Pine - - - - - 241

Fo-bi-sjo. *Chinese.* Picea firma. Japan Silver Fir - - 204

Fœhre. *German.* Pinus Sylvestris. Scotch Fir - - - 257

Fœtataxe. *French.* Torreya or Stinking Yews - - 410—413

Fon-Maki (True Maki). *China.* Podocarpus macrophylla. Long-leaved Podocarpus - - - - - - 340

Forest Tree of Moray. Pinus Sylvestris. Scotch Fir - - 257

Frankincense or Torch Pine. *Southern States of America.* Pinus Tæda. Loblolly Pine - - - - 287

Frankincense White Cedar. *N. America.* Chamæcyparis - 70

Frenèle de Desfontaines. *French.* Callitris quadrivalvis. Jointed Arbor Vitæ - - - - - - 58

Frenèles. *French.* Frenela. New Holland Conifers - - 116

Funeral Cypress. *China.* Cupressus Funebris. - - 82

Furi-hiba (Two-coloured Tree of Life). *Japan.* Biota Orientalis variegata. Variegated Chinese Arbor Vitæ - - 51

Fusi, or Fusji (buds crowned with leaves). *Japan.* Pseudo-Larix Kæmpferi. Golden, or Chinese Larch - - - 360

Fusi-kin-go (buds crowned with leaves in summer). *Japan.* Salisburia adiantifolia. Maiden-hair Tree - - - 374

Fusi-Matsu (pine full of buds). *Japan.* Larix leptolepis. Slender-scaled Japan Larch - - - - 173

Fusi-no-Ki (Tree of the Sun). *Japan.* Retinospora obtusa. Obtuse-leaved Japan Cypress - - - - 377

PAGE

Gambinur. *Sumatra.* Dacrydium elatum. Lofty Dacrydium - 105

Gan-si-hak (white on the under side, Tree of Life). *China.* Thuiopsis dolabrata. Hatchet-leaved Arbor Vitæ - 398

Gaskas. *Lapland.* Juniperus communis. Common Juniper - 131

Gedrehtæstige Kiefer. *German.* Pinus contorta. Twisted-branched Pine - - - - - - 232

Geelhout (yellow wood). *Dutch Cape.* Podocarpus Thunbergii. Thunberg's Podocarpus - - - - - 349

Genevriers. *French.* Junipers in general - - - 131

Genevrier a Gros Fruits. *French.* Juniperus macrocarpa. Purple-fruited Juniper - - - - - 135

Genevrier Commun. *French.* Juniperus nana. Dwarf Juniper 136

Genevrier flagelliforme. *French.* Juniperus Chinensis fœmina - - - - - - - 158

Genevrier Touffu. *French.* Juniperus densa. Bushy Indian Juniper - - - - - - - 141

Gewone grove Den. *Dutch.* Pinus Sylvestris. The Scotch Fir 257

Gewone Levensboom. *Dutch.* Thuja Occidentalis. American Arbor Vitæ - - - - - - - 403

Gigantic Pine. *California.* Pinus Lambertiana. Lambert's Pine 307

Ginan (Deciduous). *Japan.* Salisburia adiantifolia. Maiden-hair Tree - - - - - - - 374

Ginepro. *Italian.* Juniperus communis. Common Juniper - 131

Ginkgo or Gin-ki-go (leafless in winter). *China.* Salisburia adiantifolia. Maiden-hair Tree - - - - 374

Glieder-Fichte. *German.* Arthrotaxis. Jointed Yew - - 46

Gobrea-Sulla (Fragrant, or Indigo Fir). *India.* Picea Webbiana. Webb's Indian Fir - - - - - 226

Golden Arbor Vitæ. Biota Orientalis aurea - - - 50

Golden Cypress. Biota Orientalis aurea - - - - 50

Golden Larch. *Japan.* Pseudo-larix Kæmpferi - - 360

Gold-striped Yew. Taxus baccata argentea - - - 288

Googgal (Incense). *Cashmere.* Juniperus squamata. Scaly-leaved Nepaul Juniper - - - - - 152

Googgal Dhoop (Incense Pine). *Nepaul.* Juniperus Religiosa. Pencil or Incense Juniper - - - - - 148

Goonsi. *Nepaul.* Podocarpus neriifolia. Nerium-leaved Podocarpus - - - - - - - 343

Gornoi. *Russian.* Juniperus Sabina. Common Savin - - 150

Go-sju-sjo. *China.* Pinus parviflora. Small-flowered Japan Pine 317

Goyono-Matsu (five-leaved). *Japan.* Pinus parviflora. Small-flowered Japan Pine - - - - - 317

PAGE

GRAN. *Swedish.* Abies excelsa. Common Norway Spruce - 6

GRÆNBAUM. *German.* Abies excelsa. Common Norway Spruce - 6

GREY PINE. *American.* Pinus Banksiana. Sir Joseph Banks's Pine - - - - - - - - 230

GRIECHISCHE WEISSTANNE. *German.* Picea Cephalonica. Mount Enos Fir - - - - - - - 203

GROSSZAPFIGE CYPRESSE. *German.* Cupressus macrocarpa. Lambert's Cypress - - - - - - 91

GUATEMALA CYPRESS. Cupressus Excelsa. Tall Guatemala Cypress - - - - - - - 82

GUATEMALA-CYPRESSE. *German.* Cupressus excelsa - - 82

GULLA. *Himalaya.* Pinus longifolia. Long-leaved Pine - 275

GULLA, or GULRAI (Divine Tree). *Simla.* Cupressus tortulosa. Twisted or Bhotan Cypress - - - - 97

GUM SPRUCE. *Canada.* Abies nigra. Black Spruce Fir - - 13

HABHAL. *Asia Minor.* Juniperus Drupacea. Plum-fruited Juniper - - - - - - - 133

HAI-SUNG-TSE (Maritime Pine). *China.* Pinus Koraiensis. Corean Pine - - - - - - - 306

HAK (Tree of Life, or Evergreen), a term applied to all the Arbor-Vitæs in China. - - - - - 398, etc.

HAKEN KIEFER. *German.* Pinus Mugho. The Mugho Pine - 244

HAKMATACK. *North America, Canada, etc.* Larix pendula. Black American Larch - - - - - - 177

HANGENDE KIEFER. *German.* Pinus Pinceana. Pince's Mexican Pine - - - - - - - - 280

HARRINGTON YEW. Cephalotaxus pedunculata. Long-stalked Cephalotaxus - - - - - - 69

HARZ KIEFER. *German.* Pinus resinosa. Resinous or Red American Pine - - - - - - 256

HEAVY-WOODED PINE. *California.* Pinus ponderosa - - 281

HEDGEHOG WHITE SPRUCE. *Canada.* Abies Alba minima - 4

HEMERON ELATON (Tame Fir). *Arcadia.* Picea Apollinis. Apollo Silver Fir - - - - - - 197

HEMLOCK SPAR. *Dutch.* Abies Canadensis. Hemlock Spruce - 22

HEMLOCK SPRUCE. *North America.* Abies Canadensis - - 22

HEMLOCKS-TANNEN. *German.* Abies Tsuga, Canadensis, etc. - 21—32

HEN-HAK. *China.* Retinospora obtusa. Obtuse-leaved Japan Cypress - - - - - - - 367

HE-SUNG-TSE. *Chinese.* Pinus Massoniana. Masson's Japan Pine - - - - - - - - 241

PAGE
Himalaya-Fichte. *German.* Abies Smithiana. Indian Spruce Fir - 19
Hiba (Tree of Life). *Japan.* Biota. Chinese Arbor Vitæ - 49
Highland Pine. Pinus Sylvestris horizontalis - 258
Hijoku-hiba. *Japan.* Biota pendula. Weeping Arbor Vitæ - 55
Himalayan or Indian Spruce Fir. *Southern India.* Abies Smithiana - 19
Hime Tsuga (Dwarf Yew-leaved Spruce). *Japan.* Abies Tsuga nana. Dwarf Tsuga Spruce - 33
Hi-no-ki (Slender Shrub). *China.* Biota pendula. Weeping Arbor Vitæ - 56
Hinoki (Tree of the Sun). *Japan.* Retinospora obtusa. Obtuse-leaved Japan Cypress - 368
Hoary Frenela. *New Holland.* Frenela canescens - 118
Hoeckerige Kiefer. *German.* Pinus tuberculata. Tuberculated Cone Pine - 288
Hornige Kiefer. *German.* Pinus cornea. Horn-shaped coned Pine - 297
Hudson's Bay Pine. *North America.* Pinus Banksiana. Sir Joseph Banks's Pine - 230
Huon Pine. *Tasmania.* Dacrydium Franklinii. Franklin's Dacrydium, or Huon Pine - 106
If. *French.* Taxus baccata. Common Yew - 388
Igelfœren. *German.* Pinus Pinaster. Star or Cluster Pine - 249
Ikaling. *Himalaya.* Taxus Wallichiana - 397
Incense-bearing Cypress. Cupressus thurifera - 100
Incense Cedar. Libocedrus - 179
Indian Cedar. Cedrus Deodara - 61
Indian Cypress. Cupressus Whitleyana - 162
Indian Hemlock Spruce. Abies Brunoniana - 21
Indian Silver Fir. *Sikkim.* Picea Webbiana - 227
Indian Spruce Fir. Abies Smithiana - 19
Indische Zilver Den. *Dutch.* Picea Pindrow. Indian Silver Fir 222
Intermediate Fir. Abies Fortunei - 27
Inukaja (not wild but cultivated). *Japan.* Cephalotaxus Pedunculata. Long-stalked Cephalotaxus - 69
Inuki (wild or native). *China.* Juniperus Chinensis. Chinese Juniper - 159
Inu-Maki (false or wild Maki). *Japan.* Podocarpus Chinensis, and Macrophylla. Chinese Podocarpus, and Sciadopitys verticillata. Variegated Parasol Fir - 331 & 378
Irish Juniper. Juniperus communis Hibernica - 132

PAGE
Irish Yew. Taxus baccata fastigiata - - - - 390
Italian Stone Pine. *Italy.* Pinus Pinea - - - 252
Italienische Schwartz-Kiefer. *German.* Pinus Laricio. Corsican Pine - - - - - - 239
Ito-suga (Slender or cord-branched Evergreen). *Japan.* Biota pendula. Weeping Arbor Vitæ - - - - 56
Jalowiec. *Polish.* Juniperus communis. Common Juniper - 131
Japan Cedar. *China and Japan.* Cryptomeria Japonica - 73
Japan Hemlock Spruce. Abies Tsuga - - - - 32
Japan Laurel. Nageia Japonica - - - - - 188
Jeneverbes. *Dutch.* Juniperus communis. Common Juniper - 131
Jersey, or New Jersey Pine. Pinus inops - - - 238
Jezo-Matsu. *Japan.* Abies Jezoensis. Jesso Fir - - 12
Jezo-Momi. *Japan.* Picea firma. Japan Silver Fir - - 205
Jo-bi-sjo (Native Fir). *China.* Abies polita. Tiger's Tail Spruce - - - - - - - 16
Jointed Yews. *Van Diemen's Land.* Arthrotaxis - - 46
Joya Kiefer. *German.* Pinus patula. Spreading-leaved Mexican Pine - - - - - - - - 278
Junipers. Juniperus, Oxycedrus, etc. - - - 127–167
Kaeel or Kail (a sort of Pine). *Himalaya.* Pinus excelsa. Lofty Bhotan Pine - - - - - 299
Kaiki-Katea (Water Pine). *New Zealand.* Podocarpus Dacrydioides. Dacrydium-like Podocarpus - - - 358
Kaja. *Japan.* Cephalotaxus drupacea. Drupaceous or Plum-fruited Cephalotaxus - - - - - 68
Kaja-Ksa (Strong-scented Yew). *Japan.* Torreya nucifera. Nut-bearing Torreya - - - - - 411
Kala-bun (Black Forest). *Himalaya.* Picea Pindrow. Upright Indian Silver Fir - - - - - - 223
Kala-rai (Black Fir). *Himalaya.* Picea Pindrow. Upright Indian Silver Fir - - - - - - 223
Kamenoi-veresk. *Russian.* Juniperus Sabina. Common Savin - - - - - - - 150
Kamtschatka Larch. Larix Kamtschatica - - - 172
Kara-mats (Pine full of buds). *China.* Pseudo-Larix Kæmpferi. Golden or Chinese Larch - - - - 361
Kara-Schersae (warted branches). *Tartary.* Abies Obovata. Obovate-coned Siberian Spruce - - - - 15
Kataju. *Finland.* Juniperus communis. Common Juniper - 131
Kauri-Fichte. *German.* Dammara Australis. Kauri Pine - 109
Kauri, Kouri or Kowri. *New Zealand.* Dammara Australis - 109

PAGE

KAWAKA. *New Zealand.* Libocedrus Doniana. Don's New Zealand Arbor Vitæ - - - - - - 182

KEDR. *Russian.* Pinus Cembra. Swiss Stone Pine - - 295

KELMUNG (Resinous). *Himalaya.* Cedrus Deodara. Indian Cedar - - - - - - - 63

KELON, KELOU, KELU, KOLAN or KOLAIN. *Himalaya.* Cedrus Deodara. Indian Cedar - - - - - 63

KERESZTES-FENYO. *Hungarian.* Abies excelsa. Common Norway Spruce - - - - - - - 6

KHUTROW. *Himalaya.* Abies Smithiana. Indian Spruce Fir - 19

KIEFER. *German.* The Common name for the Pine - - 228

KIEFER. *Northern Germany.* Abies Excelsa. Common Norway Spruce - - - - - - - 6

KIENBAUM. *German.* Abies Excelsa. Common Norway Spruce 6

KIEN-LUNG-MU (Skin or bark-shedding). *China.* Pinus Bungeana. Chinese Lace-bark Pine - - - - 264

KIL. *Indian.* Pinus longifolia. Long-leaved Pine - - 275

KILOUNTA. *Bhotan.* Picea Webbiana. Webb's Indian Fir - 226

KIMERAK. *Java.* Podocarpus Amara. Bitter-fruited Podocarpus - - - - - - - 327

KIMERAK. *Philippine Isles.* Podocarpus Cupressina. Cypress-like Podocarpus - - - - - - 387

KIN-LE SUNG (Common Golden Pine). *China.* Pseudo-Larix Kæmpferi. Golden or Chinese Larch - - - 361

KIN-SJO, or KIN-SUNG-MAKI. *China.* Pale Yellow Maki-Sciadopitys verticillata. Parasol Fir - - - 378

KIN-T'SIAN-SUNG (Money Pine). *Japan.* Larix Leptolepis. Slender-scaled Japan Larch - - - - 173

KIPUTRIE. *Philippine Isles.* Podocarpus Cupressina. Cypress-like Podocarpus - - - - - - 357

KJELMANG. *India.* Pinus Pumilio. Mountain Pine - - 253

KLEINBLUTHIGE ARVE. *German.* Pinus parviflora. Small-flowered Japan Pine - - - - - 317

KNEE-PINE. *Austria.* Pinus Mugho nana - - - 245

KNIEHOLZ. *German.* Pinus Pumilio. Mountain Pine - - 253

KOJA-MAKI. *Japan.* Yew-like Maki. Sciadopitys verticillata. Whorl-leaved Sciadopitys, or Parasol Fir - - - 378

KOK-SJO-MATS (Common Black Pine). *China.* Pinus Pinaster. Star or Cluster Pine - - - - - - 249

KOK-SUNG (Black Pine). *China.* Pinus Massoniana. Masson's Japan Pine - - - - - - - 242

KONOTEGA-SIWA. *Japan.* Biota Orientalis. Chinese Arbor Vitæ 50

PAGE

Koodrai, or Koodrow (Weeping or Prickly Fir). *Bhotan.* Abies Smithiana. Indian Spruce Fir - - - - 20
Kouri or Cowri. *New Zealand.* Dammara Australis. Kauri Pine - - - - - - - - 109
Krammtsbeer. *German.* Juniperus communis. Common Juniper 131
Kranawitt. *German.* Juniperus communis. Common Juniper 131
Kroptaxus. *Dutch.* Cephalotaxus - - - - 66
Krummholz. *German.* Pinus Pumilio. Mountain Pine - 253
Ksa-Maki (fetid Maki). *Japan.* Podocarpus Macrophylla. Long-leaved Podocarpus - - - - - 340
Kukunaria. *German.* Picea Cephalonica. Mount Enos Fir - 203
Kullain (Divine Tree). *Simla.* Cupressus Tortulosa. Twisted or Bhotan Cypress - - - - - - 98
Kuminche (Lesser Sweet-nut Pine). *Thibet.* Pinus Gerardiana. Gerard's Pine - - - - - - 269
Kuosa. *Lapland.* Abies excelsa. Common Norway Spruce - 6
Kuro-matsu (Black Pine). *Japan.* Pinus Massoniana. Masson's Japan Pine - - - - - - 241
Kuruz. *India.* Pinus Webbiana. Webb's Indian Fir - - 226
Kurzgeflugelte Kiefer. *German.* Pinus brachyptera. Short Wing-seeded Pine - - - - - - 263
Kus-jak (Peacock's Feather). *Japan.* Biota Orientalis Sieboldii - - - - - - - 53
Kussuk. *Tartary.* Pinus Cembra. Swiss Stone Pine - - 295
Kwa-furi-hak (Variegated Tree of Life). *Japan.* Retinospora obtusa aurea. Golden variegated Japan Cypress - - 368
Labrador Pine. Pinus Banksiana. Sir Joseph Banks's Pine - 320
Lace-bark Pine. *China.* Pinus Bungeana - - - 264
Lærbaum. *German.* Pinus Laricio. Corsican Pine - - 239
Lambert's Cypress. *California.* Cupressus Lambertiana *vel* Macrocarpa - - - - - - - 91
Lambert's Juniper. *Nepaul.* Juniperus Lambertiana *vel* Squamata 152
Lambert's Pine. *California.* Pinus Lambertiana - - 307
Lærche. *German.* Larix. Larch - - - - 168
Larch, for its varieties see Larix.
Larch Pine. Pinus Laricio - - - - - 239
Larice. *Italian.* Larix Ledebourii. Altaian Larch - - 173
Lar, Llar. *Celtic.* Larch, Larix - - - - - 168
Latsche. *German.* Pinus Pumilio. Mountain Pine - - 253
Leem. *Himalaya.* Pinus Excelsa. Lofty Bhotan Pine - - 300
Leerbaum, or Lerchentanne. *German.* Pinus Larix. Common Larch - - - - - - - 169

PAGE
LEINBAUM. *German.* Pinus Cembra. Swiss Stone Pine - 295
LEURI or SURI. *India.* Juniperus Excelsa or Religiosa. Pencil Cedar - - - - - - - 148
LEVENSBOOM. *Dutch.* Arbor Vitæ. Tree of Life - - - 400
LEWI. *Cashmere.* Juniperus Religiosa or Excelsa. Pencil or Incense Juniper - - - - - - - 149
LHALA. *Bhotan.* Juniperus densa. Dense or Bushy Indian Juniper - - - - - - - 142
LIBOCEDRE. *French.* Libocedrus, Incense Cedar - - - 179
LIEBLICHE WEISSTANNE. *German.* Picea amabilis. Lovely Silver Fir - - - - - - - 213
LI-KIU-MOMI. (Chinese Native Fir.) *Japan.* Cunninghamia Sinensis. Chinese Cunninghamia - - - - 77
LIMBA. *Polish.* Pinus Cembra. Swiss Stone Pine - - 295
LISTVENITZA (Crown of Leaves). *Russian.* Larix Ledebourii, Altaian Larch - - - - - - 173
LLEUQUE. *Chili.* Podocarpus Andina. Andes Podocarpus - 352
LOBLOLLY, *or* OLDFIELD PINE. *Virginia.* Pinus Tæda - - 286
LO-HAN-SUNG. *Chinese.* Podocarpus Chinensis. Chinese Podocarpus - - - - - - - 330
LOLSI. *Nepaul.* Taxus Wallichiana. Wallich's Yew - - 397
LOOSAH. *Himalaya.* Taxus Wallichiana. Wallich's Yew - 397
LUCATZIN. *California.* Abies Mertensiana. Californian Hemlock Spruce - - - - - - - 29
LUMSHING, or LEMSHING. *Bhotan.* Pinus Excelsa. Lofty Bhotan Pine - - - - - - - - 299
LUNG-MU, or KIEN-LUNG-MU. *China.* Pinus Bungeana. Lacebark Pine - - - - - - - 263
LUTZ FENYO. *Hungarian.* Abies Excelsa. Common Norway Spruce - - - - - - - 6
LYCIAN JUNIPER. Juniperus Phœnicea Lycia - - - 165
MAATS. *China.* All Pines, Junipers, and other Conifers with sharp needle-shaped leaves, are called Mats, Maats, or Matsu, by the Chinese.
MAI, or MASAL. *New Zealand.* Podocarpus Spicata. Spike-flowered Podocarpus - - - - - 354
MAIDEN HAIR TREE. Salisburia adiantifolia - - - 373
MAIRO or MIRO. *New Zealand.* Podocarpus ferruginea. Rusty-coloured Podocarpus - - - - - 352
MAKI, a common name in China and Japan for all large-leaved, yew-like plants, such as Podocarpus, Sciadopitys, etc. 330
MAKI. *China.* Podocarpus, Sciadopitys, etc. 330, 340, 378

PAGE

Majoo (Nut-gall). *Nepaul.* Biota Orientalis gracilis - - 32
Maki-ksa or Kaja-ksa. *China.* Strong-scented Yew. Torreya nucifera. Nut-bearing Torreya - - - - 412
Mammoth Tree. *California.* Wellingtonia Gigantea - - 415
Mammuthfichte. *German.* Wellingtonia gigantea. Mammoth Tree - - - - - - - - 415
Maniu. *Chili.* Saxe-Gothæa conspicua. Remarkable Saxe-Gothæa - - - - - - - 372
Maniu Pino, or Manigui. *Chili.* Podocarpus Chilina. Chili Podocarpus - - - - - - - 329
Mareilo. *California.* Picea Amabilis. Lovely Silver Fir - 213
Marin. *India.* Abies Smithiana. Indian Spruce Fir - - 19
Maritime Pine. Pinus Pinaster. Star or Cluster Pine - - 249
Marro. *New Holland.* Frenela robusta. Robust Frenela - 124
Mats (True Pines). (*China.*) Pinus Sinensis, etc. - - 286
Mats, Matz, or Matsu. *Japan.* All Pines, Junipers, and Cypress-like plants with needle-shaped leaves.
Mélèze. *French.* Pinus Laricio. Corsican Pine - - 239
Mélèze d'Amerique. *French.* Larix pendula. Black American Larch - - - - - - - 177
Mélèze d'Europe. *French.* Larix Europæa. Common Larch - 169
Mélèze de la Chine. *French.* Pseudo-Larix Kæmpferi. Golden or Chinese Larch - - - - - - 360
Mélèze du Japon. *French.* Larix Leptolepis. Slender-scaled Japan Larch - - - - - - 173
Mélèze du Nepaul. *French.* Larix Griffithii vel Sikkimensis - 171
Me-Matsu (Female Pine). *Japan.* Pinus densiflora. Dense-flowered Japan Pine - - - - - 234
Menzies' Spruce. Abies Menziesii - - - - - 12
Mire-momi. *Japan.* Short-leaved, or small-coned Fir. Picea firma. Japan Silver Fir - - - - - 205
Miro or Mairo. *New Zealand.* Podocarpus ferruginea. Rusty-coloured Podocarpus - - - - - 352
Modrozew. *Polish.* Larix Ledebourii. Altaian Larch - - 173
Momi. *Japan.* Spruce or Silver Firs. Abies, Picea firma, etc. - 1
Monkey Puzzle. *Chili.* Araucaria Imbricata. Chili Pine - 29
Monstrous Spruce. Abies Excelsa monstrosa - - - 10
Moreton Bay Pine. Araucaria Cunninghamii - - - 44
Morin. *India.* Picea Pindrow. Upright Indian Silver Fir - 222
Morinda (Nectar, or Honey of Flowers). *Himalaya.* Abies Smithiana. Indian Spruce Fir - - - - 20
Moro. *Japan.* Juniperus Rigida. Stiff-leaved Japan Juniper - 138

PAGE

MORINDA. *India.* Picea Pindrow. Upright Indian Silver Fir - 222

MOSHEVELNIK. *Russian.* Juniperus communis. Common Juniper - 131

MOUNTAIN PINE. Pinus Monticola. Mountain Pine - 314

MUGHO PINE. *Pyrenees.* Pinus Mugho - 244

MUSCADIER. *French.* Torreya or Californica. Californian Nutmeg 410

NA or NAGI, *Japan.* Nageia. Catkin-bearing Laurel - 185

NATIVE CYPRESS. *Van Diemen's Land.* Frenela Gunnii 120

NEOZA. *Himalaya.* Pinus Gerardiana. Capt. Gerard's Pine - 268

NEPAUL ARBOR VITÆ. Biota Orientalis gracilis - 52

NEPAUL-CYPRESSE. *German.* Cupressus torulosa. Twisted or Bhotan Cypress - 97

NEWFOUNDLAND RED PINE. Abies rubra. Arctic Spruce Fir - 18

NEW HOLLAND DAMMARA. Dammara robusta - 113

NEWR (JUNIPER). *Cashmere.* Juniperus Religiosa, or Excelsa. Pencil or Incense Fir - 149

NEW JERSEY PINE. Pinus Inops - 238

NEW ZEALAND SPRUCE. Dacrydium Cupressinum. Cypress-like Dacrydium - 105

NEZU (Dwarf). *Japan.* Retinospora Ericoides. Heath-like Retinospora, and Thuiopsis dolabrata nana. Dwarf hatchet-leaved Arbor Vitæ - 399, 400

NIRE-MOMI, or MERE-MOMI. (*Japan.*) Picea firma. Japan Silver Fir - 205

NOKHTUR. *Himalaya.* Cedrus Deodara. Deodar, or Indian Cedar - 63

NORFOLK ISLAND PINE. Araucaria Excelsa - 45

NORFOLK-TANNE. *German.* Araucaria excelsa. Norfolk Island Pine 45

NORTH AMERICAN YEW. Taxus Canadensis - 393

NORWAY SPRUCE FIR. Abies Excelsa. Common Norway Spruce 6

NORWAY WHITE DEAL. Abies Excelsa - 7

NUT PINE. *California.* Pinus Fremontiana. Colonel Fremont's Nut Pine - 236

NUT and NUTMEG YEWS. Torreya Californica, etc. - 410—13

OBISPO. *California.* Pinus Muricata. Bishop's Pine - 246

OCOTE or DE' OCOTE. *Mexico.* Pinus Teocote. Candle Wood Pine - 287

OCOTE CHINO (Candle Wood). *Mexico.* Pinus Leiophylla. Smooth-leaved Mexican Pine - 308

OCOTE HEMBRA (Female Pine). *Mexico.* Pinus Gordoniana. Gordon's Mexican Pine - 305

PAGE

Ocote-Mache (Male Pine). *Mexico.* Pinus Grenvilliæ. Lady Grenville's Pine - - - - - - 303
Oesterreichische Schwarz-Kiefer. *German.* Pinus Austriaca. Austrian Pine - - - - - - 239
Olanda-Momi. *Japan* Cunninghami Sinensis. Chinese Cunninghamia - - - - - - - 77
Oldfield Pine. *Virginia.* Pinus Tæda. Torch or Loblolly Pine - - - - - - - - 287
Olmo. *Spanish.* Juniperus nana. Dwarf Juniper - - 136
O-Matsu or Wo-Matsu (Male Pine). *Japan.* Pinus Massoniana. Masson's Japan Pine - - - - 241
Oonum (Purple-coned Fir). *Himalaya.* Picea Webbiana. Webb's Indian Fir - - - - - - - 227
Open-leaved Jointed Yew. Arthrotaxis laxifolia - - 48
Oyamel. *French.* Picea Religiosa. Sacred Silver Fir - - 212
Oyamel. *Mexico.* Picea Religiosa. Sacred Silver Fir - - 212
Oyamel Weisstanne. *German.* Picea religiosa. Sacred Silver Fir 212
Oyster Bay Pine. *Van Diemen's Land.* Frenela Australis. Australian Frenela - - - - - - 117
Pallo Blanco. *Spanish.* Pinus Hartwegii. Hartweg's Pine - 304
Palm Pine. Pinus Australis. Southern or Swamp Pine - 261
Pama. *Himalaya.* Juniperus Squamata. Scaly-leaved Nepaul Juniper - - - - - - - 153
Paps. *Columbia.* Abies Douglasii. Douglas Fir- - - 24
Parasol (or Umbrella) Pine. Sciadopitys verticillata - - 376
Parpinja (creeping Juniper). *Bhotan.* Juniperus Squamata. Scaly-leaved Nepaul Juniper - - - - 153
Pechbaum. *German.* Abies Excelsa. Common Norway Spruce 6
Pehuen. *Chili.* Araucaria Imbricata. Monkey Puzzle - - 41
Peking Arbor Vitæ. Biota Orientalis Pekinensis - - 54
Pencil Cedar. Juniperus Bermudiana. Bermuda or Pencil Cedar - - - - - - - 140
Pendulous, or Inverted-branched Spruce. Abies Excelsa inverta. Inverted-branched Common Spruce - - 9
Perusse (Gall-leaved). *Canada.* Pinus rigida. Stiff-leaved Pine 283
Pesse. *French.* Abies, or Picea, Excelsa. Common Norway Spruce 6
Pesse Blanche. *French.* Abies alba. White Spruce Fir - 3
Pesse Mariane. *French.* Abies nigra. Black Spruce Fir - 13
Peukas or Peuchos. *Greece.* Pinus Halepensis. Aleppo or Jerusalem Pine - - - - - - 237
Pezzo. *Italian.* Abies Excelsa. Common Norway Spruce - 6
Phœnician Juniper. Juniperus Phœnicea - - - 164

PAGE
Pian-fa. *Chinese.* Biota Orientalis. Chinese Arbor Vitæ - 50
Pichta. *Russian.* Picea Pichta. The Pitch or Siberian Silver Fir - - - - - - - - 221
Pigmy Spruce. Abies excelsa pygmæa. Dwarf Spruce - - 7
Pigmy Japan Cypress. *Japan.* Retinospora obtusa pygmæa - 369
Pina. *Mexico.* Pinus Loudoniana. Loudon's Pine - - 311
Pin a Crochets. *French.* Pinus Mugho. Mugho Pine - - 244
Pin a Trochets. *French.* Pinus Pinaster minor. Cortean Pine 251
Pin de Corte. *Corsica.* Pinus Pinaster minor. Cortean Pine - 251
Pin d'Ecosse. *French.* Pinus Sylvestris. Scotch Fir - - 257
Pin d'Italie. *French.* Pinus Pinea. Italian Stone Pine - 252
Pin de Labrador. *French.* Pinus Banksiana. Sir Joseph Banks's Pine - - - - - - 230
Pin de Mars. *French.* Pinus Pinaster minor. Cortean Pine - 251
Pin de Riga, ou de Russie. *French.* Picea Pichta. Pitch Pine 221
Pin de Russie. *French.* Pinus Sylvestris horizontalis. Highland Pine - - - - - - - - 258
Pin des Abbruzzes. *French.* Pinus Brutia. Calabrian Cluster Pine - - - - - - - - 232
Pin Doux. *French.* Pinus mitis. Soft-leaved or Yellow Pine - 243
Pin Faux Cembro. *French.* Pinus Cembra. Swiss Stone Pine 295
Pin Maritime. *French.* Pinus Pinaster. Star or Cluster Pine - 249
Pin Nazaron. *Pyrenees.* Pinus Pyrenaica. Pyrenean Pine - 256
Pin Pinsot. *French.* Pinus Pinaster minor. Cortean Pine - 251
Pin Sauvage. *French.* Pinus Sylvestris. Scotch Fir - - 257
Pindrow (Weeping). *Himalaya.* Picea Pindrow. Upright Indian Silver Fir - - - - - - - - 223
Pines, the True, Pinaceæ - - - - - 228—326
Pinhao-molar. *Portuguese.* Pinus Pinca. Italian Stone Pine - 252
Pinheiro branco. *Portuguese.* Araucaria Brasiliensis. Brazil Araucaria - - - - - - - 37
Pino. *Chili.* Saxe-Gothæa conspicua. Remarkable Saxe-Gothæa. Prince Albert's Yew - - - - - 373
Pino. *Island of Chiloe.* Podocarpus Nubigæna. Cloud-born Podocarpus - - - - - - - 344
Pino Blanco (White Pine). *Mexico.* Pinus Devoniana. Duke of Devonshire's Pine - - - - - 298
Pino de'Ocote. *Mexico.* Pinus Teocote. Candle-wood Pine - 288
Pino Real (Royal Pine). *Mexico.* Pinus Buonapartea. Buonaparte Pine - - - - - - - 295, 298
Pinones. *Mexico.* Pinus Llaveana. Llave's Pine - - 274
Pitch Pine. *America.* Pinus Australis, Southern or Swamp Pine, and Pinus rigida. Stiff-leaved Pine - - - 261, 284

PAGE
Pitch or Siberian Silver Fir. Picea pichta - - - 221
Pityusa. *Greece.* Pinus Halepensis Pityusa - - - 237
Plum Fir. Podocarpus Andina - - - - - 351
Plum-fruited Juniper. *Asia Minor.* Juniperus drupacea - 133
Pond or Fox-tail Pine. *American.* Pinus Serotina - - 285
Ponum. *India.* Pinus Webbiana. Webb's Indian Fir - - 226
Portuguese Cypress. Cupressus Lusitanica. Cedar of Goa - 89
Prickly Cedar. *Apennines.* Juniperus Oxycedrus - - 137
Prickly Fir. *Himalaya.* Abies Smithiana. Indian Spruce Fir - - - - - - - - 20
Prince Albert's Yew. *Patagonia.* Saxe-Gothæa conspicua - 372
Pudma. *Himalaya.* Juniperus Squamata. Scaly-leaved Nepaul Juniper - - - - - - 152
Pumaroa. *Bhotan.* Juniperus densa. Bushy Indian Juniper - 142
Pumpkin Pine. *Canada.* Pinus Strobus. Weymouth Pine - 323
Pung-cha (Tea Tree). *N. India.* Taxus Wallichiana. Wallich's Yew - - - - - - - - 397
Quachow (deciduous). *China.* Salisburia adiantifolia. Maidenhair Tree - - - - - - - 375
Quai. *Japan.* Juniperus Chinensis. Chinese Juniper - - 158
Quesa. *Lapland.* Abies excelsa. Common Norway Spruce - 6
Quirlblætterige Schirm-fichte. *German.* Sciadopitys verticillata. Whorl-leaved Sciadopitys or Parasol Fir - - 376
Ræd'ka. *Lapland.* Juniperus communis. Common Juniper - 131
Ræsula. *India.* Pinus excelsa. Lofty Bhotan Pine - - 299
Rai, Realla, etc. (Prickly Fir). *Himalaya.* Abies Smithiana. Indian or Himalayan Spruce Fir - - - - 20
Raisalla, or Raisulla (King Pine). *Nepaul.* Picea Webbiana, Webb's Indian Fir, and Cupressus Torulosa. Twisted or Bhotan Cypress - - - - - - - 97, 227
Rakan-hak. *China, Japan.* Thuiopsis dolabrata. Hatchet-leaved Arbor Vitæ - - - - - - 398
Rakhab or Bramhi. *India.* Taxus baccata. Common Yew - 388
Rauhzapfige Taune. *German.* Picea Amabilis. Lovely Silver Fir - - - - - - - - 213
Rax-jo-sjo (Common Deciduous Fir). *Japan.* Larix Leptolepis. Slender-scaled Japan Larch - - - - - 174
Rayha. *Himalaya.* Picea Pindrow. Upright Indian Silver Fir - - - - - - - - 223
Red American Larch. Larix Microcarpa - - - 175
Red Cedar. *America.* Juniperus Virginiana. Virginian Cedar - 154
Red Pine. *America.* Pinus Australis. Southern or Swamp Pine - - - - - - - - 260

PAGE
Red or Arctic Spruce Fir. *Nova Scotia.* Abies Rubra - - 17
Red Wood Tree, or Bastard Cedar. *California.* Sequoia sempervirens - - - - - - - 380
Ree or Rhee. *Himalaya.* Pinus Gerardiana. Gerard's Pine - 269
Remu. *India.* Dacrydium Cupressinum. Cypress-like Dacrydium - - - - - - - 104
Resinous or Red American Pine. *North America.* Pinus Resinosa - - - - - - - 250
Retinospore. *French.* Retinospora Pisifera. Pea-fruited Retinospora. - - - - - - - 369
Riesen-kiefer. *German.* Pinus Lambertiana. Lambert's Pine 307
Riesen-tanne. *German.* Wellingtonia gigantea - • - 415
Riga Pine. *Russia.* Pinus Sylvestris. Scotch Fir - - 257
Rikaling. *Himalaya.* Taxus Wallichiana. Wallich's Yew - 397
Rimu. *New Zealand.* Dacrydium laxifolium. Loose-leaved Dacrydium - - - - - - - 107
Rium. *New Zealand.* Dacrydium Cupressinum. Cypress-like Dacrydium - - - - - - - 105
Roth-eibe. *German.* Taxus baccata. Common Yew - - 388
Rothe Kiefer. *German.* Pinus Sylvestris rubra. Highland Pine - - - - - - - - 258
Roth-tanne. *German.* Abies excelsa. Common Norway Spruce 6
Round-coned Chinese Pine. *China.* Pinus Pinea Cretica - 253
Roo, Roi, Roo-ee, or Row (Weeping Fir). *Himalaya.* Abies Smithiana. Indian Spruce Fir - - - - 19
Russian or Archangel Larch. Larix Ledebourii. Altaian Larch 173
Sabina. *Mexico.* Juniperus Mexicana. Mexican Sandarac Juniper - - - - - - - 161
Sabino. *Mexico.* Taxodium distichum Mexicanum. Montezuma Cypress - - - - - - 384
Saga-momi, or Sjura Momi. *Japan.* White or Silver Fir. Picea firma - - - - - - - - 205
Sah. *Bhotan.* Larix Griffithii. Sikkim Larch - - - 171
Saksin. *Mantchooria.* Cupressus Funebris. Weeping or Funeral Cypress - - - - - - - 83
Sallur. *India.* Picea Webbiana. Webb's Indian Fir - - 226
San. *Chinese.* Cryptomeria Japonica. Japan Cedar - - 74
Sand Frenela. *New Holland.* Frenela Arenosa - - - 117
Sandrin. *German.* Pinus Pumilio. Mountain Pine - - 253
San-Suga. *Chinese.* Cryptomeria Japonica. Japan Cedar - 75
San-Shu. *China.* Cunninghamia Sinensis. Chinese Cunninghamia - - - - - - - 77

PAGE

Sapin. The French name for Fir trees, Abies Canadensis, etc. - 22
Sapin Commun. *French.* Picea Pectinata. Common Silver Fir - 209
Sapin Commune. *French.* Juniperus Sabina. Common Savin - 150
Sapin d'Espagne. *French.* Picea Pinsapo. Pinsapo Fir - 224
Sapin Gracieux. *French.* Picea amabilis. Lovely Silver Fir - 213
Sapin Mineur. *French.* Picea Balsamea. Balm of Gilead Fir - 206
Sapin Noble. *French.* Picea nobilis. Noble Silver Fir - - 207
Sapin Sacre or Oyamel. *French.* Picea Religiosa. Sacred Silver Fir - - - - - - - 212
Sapindus-Fichte. *German.* Abies Orientalis. Eastern Spruce - 15
Sapinette Blanche. *French.* Abies alba. White Spruce Fir - 3
Sapinette Noire. *French.* Abies nigra. Black Spruce Fir - 13
Sapinette Noire. *French.* Abies nigra - - - - 24
Sap-Pine. *America.* Pinus rigida. Stiff-leaved Pine - - 283
Sas-coo-pas (Big Tree or Great Fir). *America.* Abies Douglasii. Douglas Fir - - - - - - - 24
Savin Juniper. *Lower Alps.* Juniperus Sabina. Common Savin 150
Sawara. *Japan.* Retinospora Pisifera. Pea-fruited Retinospora - - - - - - - - 370
Schirmfichte. *German.* Sciadopitys verticillata. Parasol Pine 376
Schmucktanne. *German.* Araucaria - - - - 35
Schwarz-fœhre. *German.* Pinus Laricio. Corsican Pine - 239
Schwartz-tanne. *German.* Abies Excelsa. Common Norway Spruce - - - - - - - 6
Schwarz-fichte. *German.* Abies nigra. Black Spruce Fir - 13
Schwarz-kiefer. *German.* Pinus Laricio. Corsican Pine - 239
Scotch Fir or Pine. *Europe.* Pinus Sylvestris - - - 257
Scrub Pine. *N. America.* Pinus Banksiana. Sir Joseph Banks's Pine - - - - - - - - 230
Sebenbaum *or* Sevenstrauch. Juniperus Sabina. Common Savin - - - - - - - 150
Seekiefer. *German.* Pinus maritima. Corsican Pine - - 239
Seki-sjo. *Japan.* Common Tree. Pinus Sinensis and Pinus Densiflora. Chinese Pine. Dense-flowered Japan Pine - 233
Semadoong. *Bhotan.* Abies Brunoniana. Indian Hemlock Spruce - - - - - - - 21
Seosa-Mats (Deciduous Fir). *Japan.* Pseudo-Larix Kæmpferi. Golden or Chinese Larch - - - - - 301
Serente. *French.* Abies Excelsa. Common Norway Spruce - 6
Seu Maki. *Japan.* Common Chinese Maki. Podocarpus Chinensis. Chinese Podocarpus - - - - 350

PAGE

SHIRGOO or SHIRKOO (Incense). *Bhotan.* Juniperus Religiosa. Pencil or Incense Juniper - - - - - 149

SHOOKPA, SHOOR, SHOORPA (Incense). *Bhotan.* Juniperus Religiosa. Pencil or Incense Juniper - - - - 149

SHUJRUTULHUE-YUT (Tree of Life). *Simla.* Cupressus Torulosa. Twisted or Bhotan Cypress - - - - 98

SHUNGTEE (Sweet Pine-nut). *Thibet.* Pinus Gerardiana. Gerrard's Pine - - - - - - - 269

SIBERIAN ARBOR VITÆ. Thuja Tatarica. Tartarian Arbor Vitæ - - - - - - - - 409

SIBERIAN SAVIN. Juniperus Pseudo-Sabina - - - 145

SIBERIAN STONE PINE. Pinus Cembra Sibirica - - - 296

SIBIRISCHE PECHTANNE. *German.* Picea Pichta. Siberian Silver Fir - - - - - - - - 221

SIGHA. *Abyssinia.* Podocarpus elongata. Elongated Podocarpus - - - - - - - 335

SILBER KIEFER. *German.* Pinus Sylvestris argentea. Silvery Scotch Fir - - - - - - - 260

SILBER-TANNE. *German.* Picea Pectinata. Common Silver Fir - - - - - - - - 209

SILLOO-HATERHEE (Fragrant Fir). *Nepaul.* Abies Brunoniana. Indian Hemlock Spruce - - - - - 22

SILVER CEDAR. Cedrus Libani glauca - - - - 66

SILVER FIRS. Picea in general - - - - 196—228

SILVER FIR (the American). *Canada.* Picea Balsamea. Balm of Gilead Fir - - - - - - 201

SILVER FIR (the Common). *Alps.* Picea Pectinata - - 209

SILVER FIR (the Indian). *Sikkim.* Picea Webbiana. Webb's Indian Fir - - - - - - - - 227

SIN. *Chinese.* Podocarpus Chinensis. Chinese Podocarpus - 330

SINOBU-HIBA (tree of life-like Shrub). *Japan.* Retinospora Squarrosa. Squarrose-leaved Retinospora - - 372

SIN-KOJA-MAKI (Wild Maki). *China.* Podocarpus Chinensis. Chinese Podocarpus - - - - - 330

SIN-MAKI (Common Maki). *China.* Podocarpus Macrophylla. Long-leaved Podocarpus - - - - - 340

SIRO-MOMI (White-wooded Fir). *Japan.* Abies polita. Tiger's Tail Spruce - - - - - - - 17

SIRUGA-MATSU (Variegated Pine). *Japan.* Pinus Massoniana. Masson's Japan Pine - - - - - 242

SI-SAN (slender-formed). *China.* Biota pendula. Weeping Arbor Vitæ - - - - - - - - 55

PAGE

Sitare-hinoki. *Japan.* Biota pendula. Weeping Arbor Vitæ - 55
Sjo-mats (Common Pine). *China.* Pinus Massoniana. Masson's Japan Pine - - - - - - - 242
Sjura-Momi (White or Silver Fir). *Japan.* Picea firma. Japan Silver Fir - - - - - - - 201
Slanez. *Russian.* Pinus Cembra. Swiss Stone Pine - - 295
Slender Spruce. Abies Excelsa tenuifolia - - - 11
Sonoubar-Sukkar (Sweet Pine Nut). *Himalaya.* Pinus Gerardiana. Gerard's Pine - - - - - 268
Sonora-Mats (Slender or Drooping Juniper). *Japan.* Juniperus Rigida. Stiff-leaved Japan Juniper - - - 138
Soorah-vyu (name of a Hindoo Divine). *Bhotan.* Cupressus torulosa. Twisted or Bhotan Cypress - - - 99
Soplong. *Bengal.* Nageia latifolia. Broad-leaved Nagi - 189
Sosno, or Sosino. *Russian.* Pinus Sylvestris. Scotch Fir - 257
Spanische Weisstanne. *German.* Picea Pinsapo. Pinsapo Fir 224
Spanish Juniper. Juniperus Thurifera - - - - 153
Spætkiefer. *German.* Pinus Serotina. Fox-tail or Pond Pine - 285
Spere. *German.* Pinus Pumilio. Mountain Pine - - 253
Spirtenholz. *Swiss.* Pinus uncinata. Scotch Fir - - 257
Spruce (the Common). *Norway, Sweden, &c.* Abies excelsa, etc. 6
Spruce Fir (the Black American). *N. America.* Abies nigra - 13
Spruce Fir (the White American). *Canada.* Abies alba - - 3
Spurred Frenela. Frenela calcarata - - - - 117
Star or Cluster Pine. *Apennines.* Pinus Pinaster - - 249
Steinkiefer. *German.* Pinus Pinea. Italian Stone Pine - 252
Sternfœhre. *German.* Pinus Pinaster. Star or Cluster Pine - 249
Stinking Cedar. *America.* Torreya taxifolia. Yew-leaved Torreya - - - - - - - 413
Stone Pine. *Italy and South of France.* Pinus Pinea - - 252
Strahlenschuppige Kiefer. *German.* Pinus radiata Radiated Cone Pine - - - - - - - 282
Strandkiefer. *German.* Pinus Pinaster. Star or Cluster Pine 249
Suga, or Ssuga Mats (Evergreen Fir). *Japan.* Cryptomeria Japonica. Japan Cedar - - - - - 74
Sugar Pine. *California.* Pinus Lambertiana. Lambert's Pine 307
Sulla (Fragrance-spreading). *Nepaul.* Pinus longifolia. Long-leaved Pine - - - - - - - 276
Sumpf-fœhre. *German.* Pinus Mugho rostrata. Beaked Mugho Pine - - - - - - - - 245
Sung-cha. *Himalaya.* Taxus Wallichiana. Wallich's Yew - 397

PAGE

SURI-HIBA (Variegated Tree of Life). *Japan.* Biota Orientalis variegata. Variegated Chinese Arbor Vitæ - - 51

SWAMP CYPRESS. *N. America.* Chamæcyparis. White Cedar - 71

SWAMP PINE. *Virginia.* Pinus Australis - - - - 260

SWAN RIVER CYPRESS. Actinostrobus Pyramidalis - - 34

SWEDISH JUNIPER. *Sweden, Denmark, etc.* Juniperus communis Suecica - - - - - - - - 132

SWISS STONE PINE. *Alps.* Pinus Cembra - - - - 295

TABLAS. *Mexico.* Pinus Ayacahuite. Ayacahuite Pine - - 293

TAMARAK (Black Larch). *America.* Larix Pendula. Black American Larch - - - - - - - 177

TANEKÁÁ or TAWAI. *New Zealand.* Phyllocladus Trichomanoides. Maiden-hair-like Phyllocladus - - - - 195

TANNE. *German.* Common name for Abies or Firs - 1—33

TANSA or TANSHING (Needle Tree). *Himalaya.* Pinus longifolia. Long-leaved Pine - - - - - - 275

TAPPA (White Wood). *America.* Pinus ponderosa. Heavy-wooded Pine - - - - - - - 281

TARENTINA PINE. *Italy.* Pinus Pinea fragilis. Thin-shelled Stone Pine - - - - - - - 253

TASMANIAN CYPRESS. Microcachrys, or the small-coned - - 184

TASSO. *Italian.* Taxus Baccata. Common Yew - - - 388

TAURISCHE SCHWARZKIEFER. *German.* Pinus Pallasiana. Taurian Pine - - - - - - - - 247

TAXACÉES. *French* term for Yews.

TAXACÉES or TAXINÉES. *French.* Taxus Torreya, Cephalotaxus, Salisburia, Podocarpus, Dacrydium, Saxe-Gothea, Phyllocladus

TCEUPE (Bamboo-like). *China.* Nageia Japonica. Japan Laurel - - - - - - - 189

TCHUGATSKOY (Savin or strong-scented Fir). *Russia.* Cupressus Nutkaensis, and Picea Cilicia. Nutka-sound Cypress. Cilician Silver Fir - - - - - 95 & 214

TEA. Pinus Canariensis. Canary Island Pine - - - 264

TENNE. (*German.*) Picea Pectinata. Common Silver Fir - 209

TEXO (Yew). *Spanish.* Taxus baccata. Common Yew - - 388

THANSA (Candle Tree). *Himalaya.* Pinus Longifolia. Long-leaved Pine - - - - - - - 276

THELOO (Spirituous Liquor). *Himalaya.* Juniperus Squamata. Scaly-leaved Nepaul Juniper - - - - 153

THEN-TSONG (Water Pine). *China.* Glyptostrobus Heterophyllus 127

PAGE

THINGIA (Yew). *Nepaul.* Abies Brunoniana. Indian Hemlock Spruce - - - - - - - 22
THINGOORI-SULLA (Fragrant Yew). Abies Brunoniana. Indian Hemlock Spruce - - - - - - 22
THOONA or THOONER-BIRMEE. *Himalaya.* Taxus Wallichiana. Wallich's Yew - - - - - - 397
THOONER (Yew). *Himalaya.* Picea Pindrow. Upright Indian Silver Fir - - - - - - - 224
THREAD-LEAVED PINE. Pinus filifolia. Thread-leaved Pine - 301
THUYOPSIS EN DOLOIRE. *French.* Thuiopsis dolobrata. Hatchet-leaved Arbor Vitæ - - - - - - 398
TIGER'S TAIL SPRUCE. Abies Polita - - - - 16
TIMBER FIRS, *i.e.* the usual Pine Trees of commerce. Abies excelsa. Common Norway Spruce, the Larch, etc. - - - 168
TINGSHI. *Sikkim.* Taxus Wallichiana. Wallich's Yew - - 397
TINIER. *France.* Pinus Cembra. Swiss Stone Pine - - 295
TOA-TOA. *New Zealand.* Phyllocladus Trichomanoides. Maidenhair-like Phyllocladus - - - - - 195
TOGA-MATSU. *Japan.* Abies Tsuga. Japan Hemlock Spruce - 32
TO-MOMI. *Japan.* Picea Firma. Japan Silver Fir - - 205
TOM THUMB. *N. America or Japan.* Retinospora Elwangeriana - 362
TORANO-WO-MOMI (Tiger's Tail Fir). *China.* Abies Polita - 17
TORCH or PITCH PINE. *America.* Pinus Rigida. Stiff-leaved Pine - - - - - - - - 283
TOSS. *Himalaya.* Picea Webbiana. Webb's Indian Fir - - 228
TOTARA. *New Zealand.* Podocarpus Totara. Totara Pine - 350
TRAUER-CYPRESSE. *German.* Cupressus Funebris. Weeping or Funeral Cypress - - - - - - 82
TSABO-HIBA. *Japan.* Biota Orientalis. Chinese Arbor Vitæ - 50
TSAIN-SUNG (Common Drooping). *China.* Cupressus Funebris. Weeping or Funeral Cypress - - - - 83
TSCHIR, TSCHIL, or CHEER. *Himalaya.* Pinus Longifolia. Long-leaved Pine - - - - - - - 275
TSUGA (Yew-leaved). *Japan.* Abies Tsuga. Japan Hemlock Spruce - - - - - - - 32
TUC-TUC (Big Tree). *Columbia.* Picea Nobilis. Noble Silver Fir - - - - - - - - 207
TZIRBOLYA. *Hungarian.* Pinus Cembra. Swiss Stone Pine - 295
UGUROO (Eagles' Bush). *Nepaul.* Juniperus Recurva. Drooping Indian Juniper - - - - - - 147
UMBRELLA or PARASOL PINE. Sciadopitys Verticillata. Whorl-leaved Sciadopitys - - - - - - 376

PAGE

URO-SIRO (leaves white beneath). *Japan.* Picea Firma. Japan Silver Fir - - - - - - - 205
VERESK-KAMENOI. *Russian.* Juniperus Davurica. Daurian Juniper - - - - - - - 141
VIRGINIAN JUNIPER, or Red Cedar Juniperus Virginiana - - 154
WACHHOLDER. *German.* Juniperus communis. Common Juniper 131
WARZIGE KIEFER. *German.* Pinus protuberans. Protuberant-scaled Mexican Pine - - - - - 319
WATER CEDAR or SWAMP CYPRESS. Chamæcyparis - - 71
WATER PINE. *Chinese.* Glyptostrobus Heterophyllus - - 126
WA-WA-MEENS (Fighting Wood). *N. America.* Taxus brevifolia. Western or Californian Yew - - - - 393
WAX-DAMMARA. *Singapore.* Podocarpus Polystachya. Many-spiked Podocarpus - - - - - - 345
WEEPING AMERICAN ARBOR VITÆ. Thuja Occidentalis pendula - 405
WEEPING ARBOR VITÆ. Biota Pendula - - - - 55
WEEPING CYPRESS. Cupressus Funebris. Weeping or Funeral Cypress - - - - - - - 82
WEEPING FIR. *Himalaya.* Pinus excelsa. Lofty Bhotan Pine 300
WEEPING LARCH. Larix Europæa pendula. Goodsall's Weeping Larch - - - - - - - 170
WEEPING SPRUCE. Abies excelsa inverta. Inverted-branched Common Spruce - - - - - - 9
WEEPING YEW. Taxus Baccata pendula or Dovastoni. Dovaston's Yew - - - - - - - 389
WEICH-NADELIGE KIEFER. *German.* Pinus mitis. Soft-leaved or Yellow Pine - - - - - - - 243
WEIHRAUCH KIEFER. *German.* Pinus Tæda. Torch or Loblolly Pine - - - - - - - - 286
WEISS-TANNE. *German.* Picea Pectinata. Common Silver Fir - 209
WERESK. *Russian.* Juniperus communis. Common Juniper - 131
WEYMOUTH PINE. *America.* Pinus Strobus - - - 322
WHITE CEDAR. Chamæcyparis Sphæroidea - - - 71
WHITE CYPRESS. *America.* Taxodium distichium. Deciduous Cypress - - - - - - - 383
WHITE DEAL. *Norway.* Abies excelsa. Common Norway Spruce 7
WHITE MEXICAN PINE. Pinus Devoniana - - - - 17
WHITE PINE (the Canadian). Pinus Strobus. Weymouth Pine - 322
WHITE SPRUCE. *Canada.* Abies alba - - - - 3
WHITE WOOD. *New Zealand.* Podocarpus Dacrydioides. Dacrydium-like Podocarpus - - - - - 358
WILLOW-LEAVED PODOCARPUS. Podocarpus Chilina - - 329

PAGE

Wood Pine. *Simla.* Abies Smithiana. Indian Spruce Fir, and Pinus Strobus, Weymouth Pine - - - 20 and 322

Woolly Silver Fir. *California.* Picea amabilis. Lovely Silver Fir - - - - - - - - 213

Wo-matsu (Male Pine). *Japan.* Pinus Massoniana. Masson's Japan Pine - - - - - - - 242

Woomun (Purple Cone). *Bhotan.* Picea Pindrow. Upright Indian Silver Fir - - - - - - 224

Wumi-matsu (Sea Coast Pine). *Japan.* Pinus Koraiensis. Corean Pine - - - - - - - 306

Yacca. *Antilles.* Podocarpus Coriacea. Leathery-leaved Podocarpus - - - - - - - 332

Yari. *Cashmere.* Pinus excelsa. Lofty Bhotan Pine - - 299

Yellow-berried Yew. Taxus baccata fructu-luteo - - 391

Yellow Deal. Pinus Sylvestris. Scotch Fir - - - 257

Yellow Pine. *America.* Pinus mitis. The Soft-Leaved Pine. *Also* Pinus Australis. Southern or Swamp Pine, *and* Pinus ponderosa. Heavy-wooded Pine - - 243, 260, 281

Yews, Taxaceæ - - - - - - 386—398

Yew, the Common. Taxus baccata - - - - 388

Yew, the Harrington. Cephalotaxus pedunculata - - 69

Zadd, Zagd, or Zeddi. *Abyssinia.* Juniperus Procera. Abyssinian Juniper - - - - - - 162

Zang-cha (blood-healing). *Himalaya.* Taxus Wallichiana. Wallich's Yew - - - - - - - 397

Zapfen-træger. *German.* Coniferæ. Conifers

Zærbel. *German.* Pinus Cembra. Swiss Stone Pine - - 295

Zelte. *German.* Pinus Pumilio. Mountain Pine - - 253

Zevenboom. Juniperus communis. Common Juniper - - 131

Zienruss. *German.* Pinus Cembra. Swiss Stone Pine - - 295

Zimbro. *Portuguese.* Juniperus communis. Common Juniper - 131

Zirbelnuss-Kiefer. *German.* Pinus Cembra. Swiss Stone Pine 295

Zwittertannen. *German.* Cunninghamia - - - 76

THE END.

BILLING AND SONS, PRINTERS, GUILDFORD, SURREY.

CATALOGUE

OF

CONIFERS, AMERICAN PLANTS, ORNAMENTAL TREES, ETC.,

CULTIVATED FOR SALE BY

ANTHONY WATERER,

KNAPHILL NURSERY,

WOKING, SURREY.

AMERICAN PLANTS.

THE KNAPHILL NURSERY is the most extensive, as it is the oldest, establishment in England in which the cultivation of American Plants has been made a speciality. At the present moment its extent exceeds 200 acres, of which more than 60 acres are allotted to the cultivation of American Plants alone. The beds and borders devoted to this class of plants extend over miles in length, and contain the largest quantity of the finest plants to be met with in this country, or in Europe. A visit, which is earnestly solicited, will prove this to be no mere assertion.

In a general way, all American Plants may be said to delight in, and to require, what is called peat soil, and it was at one time believed that they would not thrive in any other. Experience, however, proves the contrary, and it is now found that Rhododendrons, the most important of them all, as well as other of the more vigorous-habited plants, thrive in almost any soil that doe not contain lime. In many sandy loams they grow with as much vigour and luxuriance as they do in peat, and almost any loamy soil, free from lime or chalk, may be rendered suitable for them by a liberal admixture of leaf-mould, or any fibrous material, such as the parings of pasture land. When the soil is poor, a moderate dressing of farm-yard manure may be occasionally applied with advantage. Cow-dung, in a thoroughly decayed state, forms one of the best manures for these plants.

American Plants.

RHODODENDRONS.

These fine evergreens, with their magnificent flowers, are unequalled for the decoration of pleasure grounds. The stock in this nursery is of the finest quality, and almost of boundless extent. Nearly the whole of the large Standard Rhododendrons planted in Rotten Row, Hyde Park, were supplied from here; and the Exhibitions of Rhododendrons held annually in the Royal Horticultural Garden, South Kensington, consist entirely of specimen plants selected from the Knaphill collection.

HARDY SCARLET, WHITE, AND OTHER RHODODENDRONS.

We supply selections of Rhododendrons at from £5 to £10 per 100. The plants are healthy and bushy, and such as may be planted out in any situation at once. They comprise varieties of nearly all shades of colour. Many of them are from layers, and we believe that they are altogether the best plants ever offered by any nurseryman. We shall gladly send samples on application, that being the only possible way of giving a correct idea of the value of the plants, a mere statement of height being, in such cases, utterly delusive.

Purchasers of Rhododendrons who may be unacquainted with the different kinds by name, and who are willing to leave the selection to us, may depend on receiving those sorts only which after many years' observation we have found to be the most showy, and certain to thrive under ordinary treatment. A descriptive list of the kinds will be forwarded on application.

RHODODENDRON PONTICUM.

The cheapest of all Rhododendrons, being raised from seed in large quantities. It is less particular as to soil than most other sorts, and is extensively planted in game preserves, being never eaten by hares or rabbits, however numerous they may be. We are prepared to supply it at the following rates:—

PONTICUM (*Common*), nice, well-rooted, and stout plants	15*s*. per 100.
— ditto, about 1 ft. - - - - - -	21*s*. ,,
— ditto, 12 to 18 in. - - - -	30*s*. and 42*s*. ,,
— larger plants, 6*s*., 9*s*., 12*s*., and 18*s*. per dozen.	

STANDARD RHODODENDRONS.

Of these noble plants we possess much the FINEST SPECIMENS anywhere to be found, and in much larger numbers than in any other nursery. Many of them are from TWENTY to FORTY YEARS of age, and have compact well-balanced heads measuring from 15 feet to 30 feet in circumference.

WHEN IN FLOWER THESE ARE OBJECTS OF WONDERFUL BEAUTY.

American Plants.

HARDY AZALEAS.

Of all hardy flowering shrubs, none perhaps afford such a variety in colour as Azaleas, for almost every shade of pink, white, yellow, orange, and scarlet is to be found amongst them; and as they generally flower in great profusion, and are, many of them, deliciously scented, they deserve to be universally planted. They are, moreover, perfectly hardy, and will flourish wherever Rhododendrons are grown. 12s. to 30s. per dozen.

All other generally termed American Plants, such as Kalmeas, Andromedas, Heaths, are largely grown. Detailed and priced Catalogues on application.

CONIFERS AND TAXADS.

The stock of Conifers at Knaphill is as fine as anything of its kind in this country. All the plants are growing in the open ground, and are thoroughly healthy and well-rooted, not having been injuriously affected by pot-culture. They are handsome and symmetrical specimens; and all are removable with safety. Purchasers of fine specimens would do well to pay us a visit.

☞ *We reserve the right of applying Special Prices to Special Plants.*

ABIES.—Spruce Fir.	*s.*	*d.*
Albertiana (Mertensiana), 2½ to 3 ft. per doz.	18	0
— 8 to 12 ft. per doz. 42s. to	84	0
A tree with something the aspect of the Hemlock Spruce, but more gracefully pendulous.		
canadensis (Hemlock Spruce), 3, 4, 5, to 7 ft., each 1s. 6d. to	5	0
Douglasii, 1 to 1½ ft. per 100	50	0
— 2, 3, & 4 ft. per doz. 18s. to	30	0
One of the noblest and most beautiful of the Firs.		

ABIES—*continued.*	*s.*	*d.*
excelsa (Common Spruce), 1½ to 2 ft., stout per 100, 8s. to	12	6
— 4, 5, and 6 ft., handsome, per doz. 9s. to	18	0
— Clanbrasiliana — compacta — Gregoryana — pygmæa — pumila — pyramidalis	each 3 to 21	 6 0
— Renaulti 5s. each. Varieties of the common Spruce Fir, of dwarf or pigmy habit.		
— inverta (Weeping Spruce) - - each	5	0
— monstrosa - ,,	5	0
firma each 3s. 6d. to	5	0

Conifers and Taxads.

ABIES—*continued.*	*s.*	*d.*
Hookeriana, 1½ to 2 ft. - - - - - each	2	6
— 2 to 2½ ft. per doz. 30s. to	42	0
— 3 to 3½ ft. each 5s. to	7	6
Menziesii, 2, 3 to 4 ft. per doz. 12s. to	30	0
nigra, 3 to 6 ft. per doz. 12s. to	42	0
orientalis, small bedded - - per 100	20	0
— — about 1½ ft. per doz.	18	0
— 3 to 4 ft. per doz. 42s. to	60	0
— 5 to 6 ft. - each	7	6
— 7 to 8 ft. each 10s. 6d. and upwards.		
orientalis, 10, 12, to 14 ft. high, 18 to 24 ft. in circumference, magnificent plants, 21s. each and upwards.		
A most elegant tree, far too little planted.		
ARAUCARIA.		
imbricata (Chili Pine), 3 ft. - each 5s. to	7	6
— 4, 5, to 6 ft., each 10s. 6d., 21s., and upwards.		
Some very fine plants up to 10 ft. high.		
ARBOR VITÆ. *See* Thuja (*p.* 10).		
BIOTA. *See* Thuja (*p.* 10).		
CEDAR. *See* Cedrus. (*p.* 4).		
CEDAR, JAPAN. *See* Cryptomeria (*p.* 5).		

	s.	*d.*
CEDAR, WHITE. *See* Chamæcyparis (*p.* 4).		
CEDRUS.—Cedar.		
atlantica (Africana, argentea), 2 ft. per doz.	18	0
— 3 ft. - - per doz.	30	0
— 8 to 10 ft. each 7s. 6d. to	10	6
The African Cedar is of rapid growth, with a remarkably silvery aspect.		
Deodara.		
— 6 to 9 in. per 100	30	0
— 1 to 1½ ft. per 100 50s. to	100	0
— 1½ to 2 ft. per doz.	18	0
— 2½ to 3 ft. „	30	0
— 3½ to 4 ft. „	42	0
Libani (Cedar of Lebanon), 2½ to 3 ft. per doz. 30s. to	42	0
— larger, up to 8 ft. per doz. 60s. to	120	0
CEPHALOTAXUS.		
Fortunei, male and female, nice plants per doz. 30s. to	42	0
Evergreen trees inhabiting China and Japan, wonderfully hardy and free-growing, and deserving of universal cultivation.		
CHAMÆCYPARIS.—White Cedar.		
sphæroidea per doz.	18	0
— variegata per doz. 18s. to	30	0
— — fine specimens, 6 to 8 ft. high, and 10 ft. round, 7s. 6d.		

CHAMÆCYPARIS—*continued.* *s.* *d.*

to 10s. 6d. each, and upwards.

— AUREA, new - each 5 0

CRYPTOMERIA.—JAPAN CEDAR.

JAPONICA each 1s. 6d. to 3 6

— LOBBII, 4 to 5 ft. each 2s. 6d. to 3 6

This variety, also called *viridis*, is of a bright green colour.

ELEGANS, 2, 3, and 4 ft. - each 1s. 6d. to 3 6

A very elegant plant, quite distinct in appearance from C. japonica, its foliage and young growth changing to a brownish-purple in winter, but becoming green again in summer. It is quite hardy.

CUPRESSUS.—CYPRESS.

LAWSONIANA, 1 to 1½ ft. - - - per 100 50 0

— 4 to 5 ft. per doz. 30 0

— 5 to 6 ft. ,, 42 0

— ARGENTEA, 2½ to 3 ft. - - - - - each 3 6

— — larger, up to 5 ft. 5s. to 10 6

This very distinct and beautiful variety, which is remarkable not only for the silvery glaucous hue of its foliage but also for its graceful habit, has been awarded Three First Class Certificates; viz., at the Royal Horticultural Garden, at the Royal Botanic Garden, and at the Crystal Palace.

CUPRESSUS—*continued.* *s.* *d.*

LAWSONIANA ERECTA VIRIDIS, 1½ ft., good plants - per doz. 18 0

— — 2 ft., good plants per doz. 30 0

— — 3 ft., good plants each 5 0

— — some splendid plants, 4, 5, and 6 ft. high, 10s. 6d. to 21s. each, and upwards.

This Cypress, raised here, is, there is no doubt, ONE OF THE FINEST HARDY EVERGREENS IN EXISTENCE. It every year increases in beauty, and we do not believe there is an evergreen which is so universally and deservedly admired. It is purchased, without exception, by every one who sees it growing in our nursery. We quote the following description from the *Gardener's Chronicle:* "It is one of the finest—ay, one of the very finest—hardy coniferous evergreens which has been introduced to our gardens. Its narrow, erect, almost

CUPRESSUS—*continued.* s. d.

columnar mode of growth, is quite unapproached for symmetry and beauty by any other plant we know, while the slender ramifications of its close-set compact branches and branchlets give it a degree of refinement which is not seen in any other variety. This Knaphill Cypress, though dense as an Irish Yew, is, moreover, green to the very stem. We have ourselves watched this plant for several seasons, and can bear testimony to the fact, that it is utterly unaffected both as to vitality and hue by the severest frosts." It has been decorated with the Royal Horticultural Society's First Class Certificate.

— GRACILIS, about 3 ft. - - each 2 6

— — — 4 to 5 ft. each 3s. 6d. to 10 6

A plumy-growing variety of remarkable elegance, which, when more generally known, will entirely supersede the common form.

— LUTEA - - each 10s. 6d. to 21 0

CUPRESSUS—*continued.* s. d.

This is doubtless far away the finest golden Conifer yet introduced to our gardens.

LAWSONIANA NANA, per doz. 18s. to 42 0

— — ALBA NANA each 10 6

This is a very distinct and well pleasing variety.

MACROCARPA (or Lambertiana), 1½ ft. per doz. 12 0

— 3 to 4 ft. per doz. 18s. to 30 0

CYPRESS. *See* CUPRESSUS (*p.* 5.)

CYPRESS, DECIDUOUS. *See* TAXODIUM (*p.* 9).

DACRYDIUM.

FRANKLINII (Huon Pine) - - - each 2 6

FIR, SPRUCE. *See* ABIES (*p.* 3).

FIR, SILVER. *See* PICEA (*p.* 7).

JUNIPERUS.—JUNIPER.

CHINENSIS (Chinese Juniper),

— 4 to 5 ft. per doz. 18s. to 30 0

— 6 to 7 ft. each 3s. 6d. to 5 0

— 7 to 8 ft. each 7s. 6d. to 10 6

— very fine plants, 10 to 15 ft. high, each 21s. and upwards.

One of the hardiest and most beautiful evergreens in cultivation, being of free growth, of an

Conifers and Taxads.

JUNIPERUS—*continued.*	*s.*	*d.*
elegant pyramidal habit, and of a bright green colour. The pollen-bearing, or male plants, are particularly attractive when in flower.		
— AUREA - - each	21	0
COMMUNIS HIBERNICA, 3 to 4 ft., per doz. 18s. to	30	0
— COMPRESSA - each	2	6
— SUECICA (Swedish Juniper), 2 to 3 ft. per doz.	18	0
JAPONICA ALBO-VARIEGATA, nice plants per doz.	30	0
RECURVA ,,		
— DENSA ,,	18	0
VIRGINIANA (Red Cedar), 3, 4, 5, 6, to 7 ft., all finely rooted, per doz. 9s., 12s., 18s. and	42	0
— HUMILIS - - each	5	0
— GLAUCA - - ,,	2	6
— PENDULA - - ,,	2	6
SABINA (Savin) per 100, 50s. to	75	0
— very strong per doz. 12s. to	18	0
— PROSTRATA per doz.	18	0
— TAMARISCIFOLIA, per doz. 12s. to	18	0
SQUAMATA per doz.	18	0
TRIPARTITA, ,,	30	0
LARCH. *See* LARIX.		
LARIX.—LARCH.		
EUROPÆA PENDULA (Weeping Larch), each 5s. to	7	6
The branches are very long and gracefully pendulous, producing a weeping character.		

LARIX—*continued.*	*s.*	*d.*
KÆMPFERI (Golden Larch) - - - each	21	0
LIBOCEDRUS.		
DECURRENS (Thuja gigantea of gardens) 1 ft. per 100	50	0
— 1½ to 2 ft. per doz.	18	0
— 3 to 4 ft. per doz. 30s. to	42	0
— 5 ft. - - per doz.	60	0
A fine columnar evergreen tree, hardy, elegant, and free-growing.		
PICEA.—SILVER FIR.		
Noble evergreen trees. P. Pinsapo, Nordmanniana Nobilis, lasiocarpa, and magnifica are the finest and most distinct, and are worth planting everywhere.		
CEPHALONICA per doz. 18s. to	30	0
FIRMA each 3s. 6d. to	5	0
LASIOCARPA (Parsonii),		
— seedlings, in pots per doz.	18	0
— 3 to 4 ft. each 7s. 6d. to	10	6
— splendid specimens, 5, 6, 7, 8, and 10 ft. high, each 21s. and upwards.		
A grand tree, handsome, and distinct, and perfectly hardy.		
MAGNIFICA (nobilis robusta),		
— seedlings, 2 to 3 ft., each 7s. 6d.	10	6

Conifers and Taxads.

PICEA—*continued.*	*s.*	*d.*
— 3 to 5 and 6 ft. 21s. to	63	0
We have hundreds of this, certainly one of the handsomest of all the Firs.		
NOBILIS, 9 in. per 100	50	0
— 1 ft. - per doz. 18s., per 100	100	0
— 2 to 3 ft. - per doz. 30s. to	60	0
— 4, 5, 7, 8, to 10 ft. high, by 8 to 15 ft. in circumference, 10s. 6d. to 42s. and upwards.		
NORDMANNIANA,		
— 1½ to 2 ft. per doz. 18s. to	30	0
3, 4, 5, 6, to 8 ft. 3s. 6d. to 21s. and upwards.		
— splendid specimens, 10 to 15 ft. high.		
PINSAPO, 1⅓ ft., per 100	100	0
— 2 ft. - - per doz.	24	0
— 3, 4, to 5 ft. each 3s. 6d. to	10	6
— 7, 8, to 10 ft. each 21s. to	105	0
One of the most distinct and handsome of the Silver Firs.		
PINE. *See* PINUS.		
PINUS.—PINE TREE.		
AUSTRIACA (Austrian Pine),		
— 1 ft., stout, per 1,000	40	0
— 1 to 1½ ft. per 100	8	0
— about 2 ft.	21	0
Robust, hardy, and of rapid growth, this is an invaluable tree. As a shelter by the sea, or in smoky localities, it has no equal.		

PINUS—*continued.*	*s.*	*d.*
BENTHAMIANA, 2 ft. per doz.	30	0
BUNGEANA (Lace-barked Pine), each	3	6
CEMBRA (Swiss Pine), 2, 3, and 4 ft., per doz. 18s. to	30	0
DENSIFLORA - each	5	0
EXCELSA, 1 to 1½ ft., per doz. 12s. to	18	0
INSIGNIS - - 12s. to	30	0
LAMBERTIANA, 1½ ft. each	5	0
LARICIO (Corsican Pine), 1½ ft. per 100	10	0
Equally valuable with P. austriaca. This tree is not eaten by rabbits.		
MACROCARPA - - each	5	0
MONTICOLA, 1½ ft. „	2	6
— 5 to 6 ft. - - „	5	0
MUGHO - - - „	1	6
PUMILIO - - - „	1	6
PYRENAICA each 1s. 6d. to	3	6
STROBUS PUMILA SYLVESTRIS PUMILA } ea. 3s. 6d. to	10	6
Two very remarkable dwarf bushy forms of the Pine tree, the latter related to the Scotch Pine, the former to the Weymouth.		
RETINOSPORA.		
ERICOIDES per doz. 9s., 12s. to	18	0
A small pyramidal glaucous green shrub, turning purple in winter.		

Conifers and Taxads.

	s.	d.
RETINOSPORA—*continued.*		
FILICOIDES - - each	5	0
FILIFERA - - - „	2	6
Remarkably elegant, with long, slender, pendent branches.		
KETELEERII each 1s. 6d. to	3	6
LEPTOCLADA each 1s. 6d. to	3	6
LYCOPODIOIDES each 3s. 6d. to	10	6
OBTUSA, 1½ ft. per doz.	12	0
— 3 to 5 ft. per doz. 30s. to	42	0
— 8 to 10 ft. each 5s. to	10	6
OBTUSA AUREA - each	3	6
— NANA AUREO-VARIEGATA, each 3s. 6d. to	10	6
— — ALBO-VARIEGATA each	3	6
PISIFERA, 3 to 5 ft., per doz. 18s. to	42	0
— 6 to 10 ft. each 3s. 6d. to	10	6
— ARGENTEA - - each	2	6
— AUREA each 1s. 6d. to	3	6
PLUMOSA - 1s. 6d. to	3	6
— AUREA, nice plants, per 100,	100	0
— — 1½ ft. stout per doz.	30	0
— — 2 ft. - - „	42	0
SALISBURIA.—MAIDENHAIR TREE.		
ADIANTIFOLIA, standards, 6 to 8 ft., per doz.	30	0
each	3	6
SCIADOPITYS.		
VERTICILLATA (Umbrella Pine), nice plants - each 5s. to	21	0
TAXODIUM.		
DISTICHUM (Deciduous Cypress), 3 ft. per doz.	12	0
— 8 to 12 ft. each 2s. 6d. to	7	6
— PENDULUM, 2 ft. each	2	6
— — 4 to 8 ft. each 5s. to	10	6
Certainly one of the most beautiful of deciduous trees, especially in autumn, when the branches, with their drooping spray, appear to be decorated with red ostrich feathers.		
SEMPERVIRENS per doz. 18s. to	42	0
TAXUS.—YEW TREE.		
ADPRESSA, 1½ ft. per doz.	18	0
— 2 to 3 ft. - - each	3	6
— large plants, 4 to 5 ft. high, and wide, each 10s. 6d. and upwards.		
— worked as standards, very handsome.		
BACCATA (Common English Yew),		
— 1½ to 2 ft. per 100, 21s. to	50	0
— 2 to 2½ ft. per 100, 50s. to	75	0
— 3 to 3½ ft. per 100, 100s. to	150	0
— 4 to 5 ft. per doz. 24s. to	42	0
— 6, 7, to 8 ft. - each	5	0
to 10s. 6d. and upwards.		
— a large number of fine Yews, 9 to 15 ft. high, with large heads, and safe to remove, each 15s. and upwards.		

Conifers and Taxads.

TAXUS—*continued.*	s.	d.
— AUREA (Golden Yew), 1½ to 3 ft. per doz. 30s. to	60	0
We have the finest stock of Golden Yews to be met with in any nursery. Many are worked, and are PYRAMIDAL in form, with from 3 to 6 and 8 ft. of gold. We have them also as STANDARDS with globular heads of many years' growth, and quite unique.		
BACCATA DOVASTONI (Weeping Yew) per doz. 18s. to	42	0
— — worked standards, each 21s. and upwards.		
— ELEGANTISSIMA 1 ft., per doz.	12	0
— — 1½ to 2 ft. per doz.	30	0
— — standards, worked on Irish and English, very ornamental, ea. 7s. 6d. and upwards.		
— ERECTA (Upright English Yew), 3 ft. per doz.	18	0
— — 5 to 6 ft. each 5s. and upwards.		
An elegant, small-leaved, compact pyramidal shrub.		
— ERICOIDES - - each	3	6
— MONSTROSA - each	3	6
— FASTIGIATA (Irish Yew), handsome plants, 3 to 6 ft. per doz. 18s. to	60	0
— — 7 to 8 ft. per doz. 84s. to	120	0

TAXUS—*continued.*	s.	d.
— FRUCTA-LUTEO (Yellow-berried Yew), 3 to 5 ft. - each	7	6
Covered in autumn with bright orange-yellow berries.		
JAPONICA, 1½ to 3 ft., each 1s. 6d. to	5	0
THUJA.—ARBOR VITÆ.		
ELWANGERIANA - each	1	6
GIGANTEA. *See* Libocedrus (*p.* 7).		
LOBBII, 3 to 4 ft. per doz.	18	0
— 4 to 5 ft. ,,	30	0
— 6 to 7 ft. and as much round, each 3s. 6d. to	5	0
— magnificent plants, 8 to 12 ft. high, each 7s. 6d. and upwards.		
OCCIDENTALIS (American Arbor Vitæ), for hedges, 3, 4, and 5 ft., per 100, 25s., 50s. and	75	0
— 5 to 6 ft. - per 100	100	0
This is a famous plant for making a quick, good, permanent, and cheap evergreen hedge. It is thoroughly hardy, bears clipping well, is of very rapid growth, and is not particular as to soil. The hedges in our nursery, which are so generally admired, are composed of this plant.		
OCCIDENTALIS HOOKERIANA (pygmæa) each	2	6
A dwarf pigmy		

Conifers and Taxads.

THUJA—*continued.*	*s.*	*d.*
form, analogous to the dwarf forms of Abies.		
— LUTEA - - - each	10	6
— VERVAENEANA per doz. 18s. to	30	0
A distinct kind, with foliage of a yellowish hue in winter.		
ORIENTALIS (Chinese Arbor Vitæ: Biota), per doz. 12s. to	18	0
— AUREA, 1½ - per 100	100	0
per doz.	18	0
— — 2 ft. high, 3 to 4 ft. in circumference, per doz. 30s. to	42	0
— — numbers of fine plants, 3, 4, 5 to 6 ft. high, from 12 to 15 ft. in cirumference, the oldest and finest specimens to be found in any nursery, from 10s. 6d. each and upwards.		
This beautiful dwarf growing dense shrub, the young growths of which, in spring, put on a beautiful golden green hue, originated in this nursery.		
ELEGANTISSIMA, nice plants, 1 to 1½ ft. per doz.	18	0
— — 1½ to 2 ft. per doz.	30	0
— — fine specimens each 7s. 6d. to	21	0
Another beautiful form of golden Arbor Vitæ, more erect and columnar than aurea.		

THUJA—*continued.*	*s.*	*d.*
— SEMPER AUREA, each	7	6
per doz. 60s. to	84	0
This is of the same habit as the well-known Thuja aurea; it retains its beautiful golden hue throughout the year. We have proved it, and recommend it as one of the most distinct and beautiful plants in cultivation.		
PENDULA (Biota) each	2	6
PLICATA, 3 ft. per doz.	18	0
— 4 ft. per doz. 30s. to	42	0
TATARICA (Biota: pyramidalis), 3 ft. per doz.	18	0
WARREANA, stout plants, 1½ to 2 ft., per 100,	50	0
per doz. 6s. to	12	0
— 2½ to 3 ft. per doz. 9s. to	12	0
— 3 to 4 ft. per doz. 18s. to	30	0
This is by far the hardiest and best of the Arbor Vitæs. There is probably no more useful evergreen grown.		
ZACCARINIANA each 3s. 6d. to	7	6
THUJOPSIS.		
BOREALIS (Cupressus nutkaensis), 2 to 2½ ft. per doz.	18	0
— 3 to 4 ft. per doz. 18s. to	30	0
— 5 to 6 ft. per doz. 42s. to	60	0
— 7 to 8 ft., and 10 to 12 ft. in circumference, each 7s. 6d. and upwards.		

THUJOPSIS—*continued.*	s.	d.
— DOLABRATA per doz. 30s. to	60	0
— VARIEGATA per doz. 30s. to	60	0
LÆTEVIRENS - - each	3	6
STANDISHII - - - each	5	0
WELLINGTONIA. The Big Tree or Mammoth Tree of the Americans, and one of the most remarkable evergreen trees yet introduced.		
GIGANTEA, stout plants, per 100	100	0
— 1½ to 2 ft. per doz.	30	0
— 4 to 5 ft. each 7s. 6d. to	10	6
— 6, 7, 8 to 9 ft. each 21s. to	63	0
YEW. *See* TAXUS (*p.* 9).		

HARDY ORNAMENTAL AND FLOWERING TREES.

Here will be found many plants which furnish masses of beautiful flowers, either in the early spring months or later in the year. When to these flowers are added the varied tints assumed by the foliage of the different species, especially in spring and autumn, it will be evident that such trees are invaluable for brightening up the sombre masses which evergreens alone, and Conifers in particular, are apt to present.

ACACIA. *See* ROBINIA (*p.* 19).	s.	d.
ACER.—MAPLE.		
COLCHICUM RUBRUM, per doz. 12s. to	30	0
In this handsome tree the young leaves are crimson.		
NEGUNDO (Ash-leaved Maple), 7 to 9 ft. per doz. 6s. to	12	0
—VARIEGATUM, dwarfs, per doz. 6s. to 9s. and	12	0
— — standards per doz. 18s. to	42	0
One of the most strikingly beautiful of variegated trees, remarkably effective when growing intermixed with dark coloured evergreens, and equally attractive in masses on the lawn, or in the shrubbery.		
PLATANOIDES (Norway Maple), 7 to 8 ft. per 100, 21s. to	30	0
— fine trees, 10 to 15 ft., - per doz. 18s. to	42	0
— LACINIATUM (Eagle's Claw or Kite's Claw Maple), - per doz.	18	0
PLATANOIDES LORBERGII, 5s. each		

Ornamental and Flowering Trees.

	s.	d.
ACER—*continued.*		
PLATANOIDES SCHWEDLERII, - - - each	5	0
POLYMORPHUM ATROPURPUREUM.		
— DISSECTUM.		
— PALMATIFIDUM.		
— ROSEA MARGINATUM.		
— SANGUINEA. - each	5	0
PSEUDO-PLATANUS (Sycamore), 7 to 8 ft. per 100, 21s. to	30	0
— fine trees, 10 to 16 ft., per doz. 18s. to	60	0
— PURPUREUM per doz. 6s. to	12	0
— — fine standards, 12 to 14 ft., each 5s. to	7	6
— ALBO-VARIEGATUM per doz. 12s. to	30	0
RUBRUM (Scarlet Maple), 6 to 8 & 10 ft., per doz. 6s. to	30	0
SACCHARINUM (Sugar Maple), 5 ft. per doz.	6	0
STRIATUM (Snake-bark Maple), 4 ft. per doz.	6	0
TATARICUM, 5 ft. per doz.	6	0
ÆSCULUS.—HORSE CHESTNUT.		
HIPPOCASTANUM, 3 to 4 ft. - - per 100	8	0
— 6 to 8 ft. per 100, 30s. to	50	0
— 8 to 10 ft., stout per 100, 100s. to	150	0
— fine trees, 10 to 15 ft., - per doz. 30s. to	84	0
— FLORE-PLENO, each 1s. 6d. to	2	6
— — 10 to 14 ft., fine trees with good heads, 30s. to 60s. per doz. and upwards. More beautiful even than the common form, on account of the longer duration of the blossoms.		
ÆSCULUS—*continued.*		
— RUBICUNDA ROSEA (Scarlet Horse Chestnut), 5 to 6 ft. per doz. 12s. to	18	0
— — 10 to 12 and 15 ft., fine handsome trees, with large heads, 3s. 6d., 5s. to 7s. 6d. each and upwards.		
AILANTUS.—TREE OF THE GODS.		
GLANDULOSA, 4 to 6 ft. per doz.	6	0
— 8 to 10 ft. per doz. 18s. to	42	0
ALDER. *See* ALNUS (*p.* 13).		
ALMOND. *See* AMYGDALUS (*p.* 13).		
ALNUS.—ALDER.		
GLUTINOSA LACINIATA each	1	6
IMPERIALIS ASPLENIFOLIA LACINIATA each	1	6
The leaves of this variety are very elegantly cut.		
AMELANCHIER.		
BOTRYAPIUM (Snowy Mespilus),		
Small - per doz.	6	0
Larger - - "	18	0
FLORIDA - - "	18	0
AMYGDALUS.—ALMOND.		

Ornamental and Flowering Trees.

	s.	d.
AMYGDALUS—*continued.*		
COMMUNIS (Common Almond), standards per doz. 12s. to	18	0
COMMUNIS MACROCARPA, standards, per doz. 12s. to	18	0
PERSICA FLORE-PLENO (Double-fld. Peach), per doz. 12s. to	18	0
— CAMELLIÆFLORA (Camellia-fld. Peach), per doz. 12s. to	18	0
— DIANTHIFLORA (Carnation-fld. Peach) per doz. 12s. to	18	0
APPLE. *See* PYRUS (*p.* 18).		
ARALIA.		
CANESCENS (japonica) each	1	6
— 4 to 5 ft. each 2s. 6d. to	3	6
ASH. *See* FRAXINUS (*p.* 16).		
ASH, MOUNTAIN. *See* PYRUS (*p.* 18).		
ASPEN. *See* POPULUS (*p.* 17).		
BEECH. *See* FAGUS (*p.* 15).		
BETULA.—BIRCH.		
ALBA (Silver Birch), 6 to 8 ft., - per 100	21	0
— 8 to 10 ft. per 100, 30s. to	50	0
— 10 to 15 ft. per doz. 18s. to	30	0
— CRISPA „ 18s. to	30	0
— FASTIGIATA - each	2	6
A new and very fine variety of Birch, as upright in growth as a Lombardy Poplar.		
— INCISA PENDULA (Cut-leaved Weeping Birch), per doz. 18s. to	24	0
BETULA—*continued.*		
One of the most beautiful weeping trees in cultivation.		
PENDULA (Weeping Silver Birch), fine standards per doz.	42	0
PENDULA ELEGANS, each 3s. 6d. to	7	6
— PENDULA YOUNGII (Young's New Weeping Birch), each 3s. 6d. to	7	6
A very distinct, desirable, and picturesque tree.		
BETULA PURPUREA. (Purple Birch) each 10s. 6d. to	21	0
BIRCH. *See* BETULA (*p.* 14).		
CALOPHACA.		
WOLGARICA - - each	2	6
CARAGANA.		
standards, of sorts. per doz.	30	0
CASTANEA.—CHESTNUT.		
VESCA (Spanish Chestnut), 8 to 10 ft., fine per doz. 18s. to	30	0
VESCA ASPLENIFOLIA (heterophylla laciniata), up to 7 or 8 ft., - per doz. 18s. to	42	0
— CUCULLATA, pyramids, fine, - per doz.	42	0
— AUREO-VARIEGATA (Golden Variegated Spanish Chestnut), per doz. 18s. to	42	0
CATALPA.		
SYRINGÆFOLIA, 5 to 6 ft., - per doz. 6s. to	12	0
— standards per doz. 18s. to	42	0

Ornamental and Flowering Trees.

CATALPA—*continued.*	*s.*	*d.*
— AUREA, fine plants, each 3s. 6d. to	5	0
A decorative tree of great merit.		
CERASUS.—CHERRY.		
MAHALEB VARIEGATA each	1	6
PADUS (Bird Cherry) per doz.	6	0
CERASUS PUMILA PENDULA - per doz.	18	0
SINENSIS ROSEO-PLENA each	1	6
Handsome double rose-coloured flowers.		
VULGARIS FLORE-PLENO (Double-blossomed Cherry), standards and dwarfs per doz. 12s. to	18	0
WATERERII - - each	2	6
CHERRY. *See* CERASUS (*p.* 15).		
CHESTNUT. *See* CASTANEA (*p.*14).		
CHESTNUT, HORSE. *See* ÆSCULUS (*p.* 13). and PAVIA (*p.* 17).		
CRAB. *See* PYRUS (*p.* 18).		
CRATÆGUS.—THORN.		
OXYACANTHA		
— PENDULA (Weeping Thorn), per doz. 18s. to	30	0
— PUNICEA (Scarlet Thorn), per doz. 12s. to	18	0
— PUNICEA FLORE-PLENO NOVA, dwarfs and standards, per doz. 12s. to	18	0
This new Double Crimson Thorn, is a most valuable acquisition.		

CRATÆGUS—*continued.*	*s.*	*d.*
— MULTIPLEX (Double White Thorn), 4 ft. and upwards, per doz. 12s. to	18	0
— FLORE-PLENO (Double Pink Thorn), 4 ft. and upwards per doz. 12s. to	18	0
MANY OTHER ORNAMENTAL KINDS.		
CYTISUS.		
LABURNUM (Common Laburnum), standards per doz. 12s. to	30	0
— Autumnalis (Autumn flowering) — Curled Leaf — Weeping Sweet Scented Scotch — per doz. 12s. to	18	0
ALPINUS (Scotch Laburnum), standards per doz. 12s. to	18	0
— PURPURASCENS (Purple Laburnum), standards, per doz. 12s. to	18	0
WATERERII (Waterer's Laburnum), per doz. 18s. to	30	0
Raised here many years ago, and undoubtedly the finest of all the Laburnums, being remarkable for the large clusters of its showy bright yellow flowers.		
ELM. *See* ULMUS.		
FAGUS.—BEECH.		
FERRUGINEA LATIFOLIA (Chestnut-leaved Beech), per doz. 18s. to	42	0

FAGUS—*continued.*	*s.*	*d.*
SYLVATICA (Common Beech), 8 to 10 ft., fine per doz. 18s. to	30	0
— PURPUREA (Purple Beech), 3 to 4 ft. per doz. 6s. to	12	0
— — 6 to 8 ft. per doz. 18s. to	30	0
— — 10 to 14 ft. per doz. 42s. to	120	0
— PENDULA (Weeping Beech), per doz. 42s. to	84	0
— HETEROPHYLLA (Cut-leaved Beech) per doz. 18s. to	42	0
— ASPLENIFOLIA (Fern-leaved Beech) per doz. 18s. to	42	0
— CRISTATA (Crested or Curled-leaved Beech), per doz. 18s. to	42	0
FRAXINUS.—ASH.		
EXCELSIOR AUCUBÆFOLIA, standards per doz. 18s. to	30	0
— AUREA, standards, per doz. 18s. to	30	0
— AUREA PENDULA (Gold-barked Weeping Ash) per doz. 18s., 30s., 42s. to	60	0
EXCELSIOR LACINIATA, standards, per doz. 18s. to	30	0
— PENDULA (Weeping Ash), fine tall stems per doz. 42s. to	84	0
JUGLANDIFOLIA (Walnut-leaved or Green Ash), standards, per doz. 18s. to	30	0
ORNUS (Flowering		

FRAXINUS—*continued.*	*s.*	*d.*
Ash), standards, per doz. 18s. to	30	0
AND OTHER SORTS.		
GLEDITSCHIA.		
TRIACANTHOS (Honey Locust, or Three-thorned Acacia), 5 to 6 ft. per doz. 6s. to	12	0
SINENSIS, 5 to 6 ft. per doz. 6s. to	12	0
GYMNOCLADUS.		
CANADENSIS each 1s. 6d. to	3	6
HALIMODENDRON.		
ARGENTEUM - - each	2	6
HAWTHORN. *See* CRATÆGUS (*p.* 15).		
JUGLANS.—WALNUT.		
MACROPHYLLA - - each	5	0
REGIA (Common Walnut), 4 ft. - per doz.	6	0
— 6 to 7 ft. per doz. 9s. to	12	0
— fine standards per doz. 42s. to	60	0
— LACINIATA (Fern-leaved Walnut), per doz. 42s. to	60	0
Distinct on account of the cutting or lobing of its foliage, which is developed in a very irregular manner, the result being handsomely divided fern-like leaves.		
— PENDULA (Weeping Walnut), - - - each	7	6
KOLREUTERIA.		
PANICULATA - per doz.	6	0
— larger per doz. 18s. to	30	0
LABURNUM. *See* CYTISUS (*p.* 15).		

Ornamental and Flowering Trees.

LIQUIDAMBAR.	*s.*	*d.*
STYRACIFLUA per doz. 9s. to	18	0
A handsome tree, the leaves of which turn in autumn to a deep purplish red.		
LIME. *See* Tilia (*p.* 17).		
LIRIODENDRON.—Tulip Tree.		
TULIPIFERA per doz. 6s. to	18	0
— AUREO MACULATUM each	5	0
LOCUST TREE. *See* Robinia (*p.* 19).		
MAGNOLIA.		
TRIPETALA (Umbrella Tree), 6 to 8 ft. each 3s. 6d. to	5	0
MALUS. *See* Pyrus (*p.* 18).		
MAPLE. *See* Acer (*p.* 12).		
MESPILUS. *See* Amelanchier (*p.* 13).		
NEGUNDO. *See* Acer (*p.* 12).		
NUTTALIA CERASSIFORMIS - each	2	6
See Prunus Californica (*p.* 29).		
OAK. *See* Quercus (*pp.* 19 and 29).		
ORNUS. *See* Fraxinus (*p.* 16).		
PAULOVNIA.		
IMPERIALIS per doz. 12s. to	30	0
PAVIA.—Smooth Horse Chestnut.		
CALIFORNICA (Californian Buckeye), each	1	6
FLAVA (Yellow Horse Chestnut), fine standards, each 2s. 6d. to	7	6

PAVIA—*continued.*	*s.*	*d.*
Bears yellow flowers; the decaying leaves are also yellow.		
MACROSTACHYA, per doz.	18	0
PEACH. *See* Amygdalus (*p.* 13).		
PEAR. *See* Pyrus (*p.* 18).		
PLANE. *See* Platanus (*p.* 17).		
PLATANUS.—Plane.		
OCCIDENTALIS (acerifolia), 3 to 4 ft., per 100	30	0
— 4 to 6 ft. per 100, 40s. to	50	0
— fine, 10 to 15 ft., per doz. 42s. to	120	0
Too much cannot be said in praise of this Plane as a town tree.		
ORIENTALIS, 8 to 14 ft., per doz., 12s. to	84	0
POPLAR. *See* Populus (*p.* 17).		
POPULUS.—Poplar.		
ALBA (Abele, or Silver Poplar), 3 to 4 ft. per 100	21	0
— 7 to 8 ft. per doz. 6s. to	9	0
ANGULATA (Carolina Poplar) - - per doz.	12	0
BALSAMIFERA (Balsam Poplar), 7 to 8 ft. per doz.	6	0
CANADENSIS NOVA, 5 ft. per 100	21	0
— — fine trees, 16 to 18 ft., each 3s. 6d. to	5	0
This is a new variety of Poplar. We have plants of it three years old 15 ft. to 20 ft. high, and		

Ornamental and Flowering Trees.

POPULUS—*continued.*	*s.*	*d.*
stout in proportion. It is the fastest growing tree we are acquainted with.		
CANDICANS (Ontarian Poplar), 7 to 8 ft. per doz.	6	0
— fine trees, 12 to 15 ft., - per doz. 30s. to	42	0
FASTIGIATA (Lombardy Poplar), 10 to 12 ft. per doz. 6s. to	12	0
MONILIFERA (Black Italian Poplar), 8 to 12 ft., per doz. 6s. to	12	0
A rapid growing tree, which thrives well in towns.		
TREMULA (Aspen) per doz. 6s. to	12	0
— PENDULA (Weeping Poplar), per doz. 18s. to	84	0
PTELEA.		
TRIFOLIATA per doz. 12s. to	18	0
PYRUS.		
AUCUPARIA (Mountain Ash), 5 to 6 ft. per 100, 8s. to	12	6
— 8 to 10 ft. per 100, 30s. to	100	0
— larger, 12 to 15 ft., per doz. 18s. to	42	0
— PENDULA (Weeping Mountain Ash) per doz. 18s. to	30	0
FRUCTU-LUTEO (Yellow Mountain Ash), per doz. 6s. to	12	0
— — 10 to 12 ft. per doz. 18s. to	30	0
HYBRIDA (Bastard Service Tree), 7 to 10 ft. per doz. 12s. to	18	0

PYRUS—*continued*	*s.*	*d.*
MALUS BACCATA (Scarlet Siberian Crab) per doz. 12s. to	18	0
MALUS FLORIBUNDA, per doz. 12s. to	18	0
One of the most brilliant of all spring-flowering trees. It is of moderate stature, and of rather slender yet free growth. Its long flexible shoots are covered from end to end early in May with blossoms, which are of a rich crimson outside, and in the bud state resemble ropes of cherries, while, being white within, they show, when expanded, a beautiful contrast of colour. This tree is worthy of a prominent place in every garden, and must charm every one by its profuseness of bloom, and the brightness and play of its colouring ; a real gem.		
PINNATIFIDA (Pinnatified Service Tree), 7 to 10 ft. - per doz.	18	0
SALICIFOLIA (Weeping), per doz. 30s. to	42	0
SPECTABILIS (Chinese Crab) per doz. 12s. to	18	0
— ROSEO-PLENA per doz. 12s. to	18	0
A wonderfully		

Ornamental and Flowering Trees.

PYRUS—*continued.*	*s.*	*d.*
beautiful spring-flowering tree, the branches of which, when in bloom, may be compared to garlands of double pink roses.		
VESTITA (Sorbus) per doz. 12s. to	18	0
QUERCUS.—OAK.		
CERRIS VARIEGATA (Silver-striped Turkey Oak) - - each	5	0
— PENDULA (Weeping Turkey Oak), standards each 3s. 6d. to	7	6
COCCINEA (Scarlet Oak), 4 to 5 ft. - per 100	50	0
— 8 to 10 ft. per doz. 12s. to	30	0
— fine stout trees, 12 to 15 ft., each 3s. 6d. to	5	0
The scarlet Oak is a handsome free-growing tree; the leaves turn to a bright red in autumn.		
PALUSTRIS (Pin Oak), 4 to 5 ft. - per 100	50	0
— fine standards, about 10 ft. per doz. 30s. to	42	0
ROBUR CONCORDIA (Golden Oak), each 3s. 6d. to	7	6
— HETEROPHYLLA (Fern-leaved Oak) each 3s. 6d. to	5	0
— PENDULA (Weeping English Oak), each 5s. to	7	6
— NIGRA (Purple Oak), each 5s. to	7	6

ROBINIA.—LOCUST TREE.	*s.*	*d.*
HISPIDA (Rose Acacia), each 1s. 6d., per doz. 12s. to	18	0
A beautiful low tree, producing in summer drooping racemes of handsome deep rose-coloured flowers.		
— GRANDIFLORA, each	1	6
per doz. 12s. to	18	0
PSEUDACACIA (Common or False Acacia), 6 to 8 ft. per doz. 6s. to	9	0
— BESSONIANA per doz. 12s. to	30	0
A noble-looking tree, remarkably vigorous, and more densely leafy than other kinds.		
— DECAISNEANA, each 1s. 6d., per doz. 12s. to	18	0
— PENDULA (Weeping Acacia), standards each 3s. 6d. to	5	0
— AUREA (Golden Acacia), standards each	3	6
— UMBRACULIFERA (inermis: Parasol Acacia), standards each	3	6
per doz. 42s. to	60	0
— VISCOSA (glutinosa) per doz. 12s. to	18	0
SALIX.—WILLOW.		
BABYLONICA (Weeping Willow), standards per doz. 12s. to	30	0
— MASCULA - per doz. 18s. to	30	0
A distinct variety of Weeping Willow.		

Ornamental and Flowering Trees.

SALIX—*continued.*	*s.*	*d.*
CAPREA PENDULA (Kilmarnock Weeping Willow) - per doz.	30	0
DAPHNOIDES ,,	3	0
LAURIFOLIA ,,	3	0
PURPUREA PENDULA (American Weeping Willow), per doz. 12s. to	30	0
REGALIS - - per doz.	3	0
ROSMARINIFOLIA per doz.	6	0
SERVICE TREE. *See* PYRUS (*p.* 18).		
SOPHORA.		
JAPONICA per doz. 6s. to	12	0
— PENDULA per doz. 60s. to	84	0
One of the most characteristic of all weeping trees, and one of the greatest elegance and beauty.		
— VARIEGATA each 2s. 6d. to	3	6
SORBUS.—*See* PYRUS (*p.* 18).		
SYCAMORE. *See* ACER (*p.* 12).		
THORN. *See* CRATÆGUS (*p.* 15).		
TILIA.—LIME.		
ALBA (argentea)		
— PENDULA, standards, each 3s. 6d. to	7	6
This variety forms a noble weeping tree.		
EUROPÆA (Common Lime Tree),		
— 5 to 6 ft. per 100, 30s. to	40	0
— 7 to 8 ft. - per 100,	50	0
— 8 to 10 ft. per doz. 9s. to	18	0
— 10 to 12 ft. per doz. 24s. to	30	0

TILIA—*continued.*	*s.*	*d.*
— 15 to 16 ft. per doz. 42s. to	84	0
— 16 to 20 ft., splendid trees, 7s. 6d. to 10s. 6d. each.		
A grand tree for avenues, and for open situations in park scenery, and one which should never be omitted in the neighbourhood of country mansions. Its fragrance is a great recommendation.		
TULIP TREE.—*See* LIRIODENDRON (*p.* 17).		
ULMUS.—ELM.		
AMERICANA PENDULA (Scampston Weeping Elm) per doz. 30s. to	42	0
One of the finest weeping trees.		
CAMPESTRIS AUREA (Golden Elm), per doz. 18s. to	42	0
Very ornamental as a standard.		
CAMPESTRIS PENDULA (fol. argent. Variegatus) - - per doz.	42	0
The New Variegated Weeping Elm.		
MONTANA PENDULA (Weeping Elm), per doz. 30s. to	120	0
A beautiful and highly characteristic tree.		
— PURPUREA (Purple Elm), per doz. 6s. to 18s. &	30	0
GLABRA VEGETA (Chi-		

Ornamental and Flowering Trees.

ULMUS—*continued.*	s.	d.
chester or Huntingdon Elm), per doz. 6s. to 18s. &	30	0
The most vigourous-growing of all the Elms.		
GLABRA MICROPHYLLA VARIEGATA (Silver-leaved Elm), per doz. 6s. to 18s. &	30	0
GUERNSEY, per doz. 6s. to	18	0
PLUMOSA „ 6s. to	18	0

ULMUS—*continued.*	s.	d.
SIBERIAN, per doz. 6s. to	18	0
WHEATLY „ 6s. to	18	0
OTHER SORTS.		
VIRGILIA.		
LUTEA, 5 to 6 ft. each	1	6
— 10 to 12 ft. each 3s. 6d. to	7	6
WALNUT. *See* JUGLANS (*p.* 16).		
WILLOW. *See* SALIX (*p.* 19).		

HARDY EVERGREEN AND DECIDUOUS FLOWERING SHRUBS, &c.

These are plants in everyday demand. It is here that we find the materials for planting shrubberies; and from amongst this class of plants the chief garniture of home pleasure-grounds has to be sought.

AARON'S BEARD.	s.	d.
See HYPERICUM (*p.* 26).		
ALMOND, DWARF.		
See PRUNUS (*p.* 29).		
ARALIA. *See also p.* 14.		
SIEBOLDII (true japonica) - - - each	2	6
ARBUTUS.—STRAWBERRY TREE.		
CROOMEI each 3s. 6d. to	5	0
UNEDO (Common Arbutus), each 1s. 6d. to	2	6
ARUNDINARIA.		
FALCATA (Himalayan Bamboo), - each	1	6
JAPONICA (Bambusa Metake: Japanese Bamboo) - per doz.	18	0

AUCUBA.—JAPAN LAUREL.	s.	d.
JAPONICA (vera) per doz. 18s. to	42	0
— plants nicely set with berries, per doz. 30s. to	60	0
— worked on stems, 2 to 3 ft. high, with nice heads covered with berries, very ornamental, each 10s. 6d. to	21	0
— MACULATA, fine bushy plants, 1½ to 4 ft. high, per 100 £5 to £25, per doz. 12s. to	84	0
—— plants nicely set with berries, each 1s. 6d. to	10	6

Hardy Shrubs.

AUCUBA—*continued.*	*s.*	*d.*
— MASCULA (Male) per doz. 12s. to	30	0
— SEEDLINGS, nice plants - per doz.	6	0
— larger, per 100 £5, per doz. 18s. to	30	0
BAMBOO. *See* ARUNDINARIA and BAMBUSA. (*p.* 21).		
BAMBUSA.—BAMBOO.		
FORTUNEI (Variegated Bamboo) per doz.	18	0
BAY. *See* LAURUS. (*pp.* 27 and 28).		
BERBERIDOPSIS.		
CORALLINA - - each	2	6
BERBERRY. *See* BERBERIS. (*p.* 22).		
BERBERIS.—BERBERRY.		
JAMESONII, per doz.	6	0
AQUIFOLIUM, 1 to 1½ ft., stout and well rooted per 100, 12s. 6d. to	21	0
— picked bushes, larger, per doz. 6s. to	12	0
BEALII, stout plants, per doz. 12s. to	18	0
Allied to B. japonica, which see.		
DARWINII, 1, 1½, and 2 ft., - per doz. 6s., 12s., and	18	0
DULCIS - - per doz.	6	0
EMPETRIFOLIA ,,	12	0
FORTUNEI - - each	1	6
JAPONICA, stout plants, per doz.	6	0
— larger per doz. 12s. to	18	0
NEUBERTII - per doz.	9	0
STENOPHYLLA - each	1	6
VULGARIS (Common Berberry), per doz.	6	0
— ATROPURPUREA per doz.	12	0

BOX-EDGING	*s.*	*d.*
per 100 yards	50	0
BOX TREE. *See* BUXUS. (*p.* 22).		
BOX THORN. *See* LYCIUM (*p.* 28).		
BROOM. *See* CYTISUS (*p.* 24).		
BROOM, SPANISH. *See* SPARTIUM (*p.* 30).		
BUDDLEA.		
GLOBOSA - - each	1	0
BUXUS.—BOX TREE.		
BALEARICA (Minorca Box), per doz. 9s. to	18	0
SEMPERVIRENS (Common Box), 2, 3, 4, 5, 6 to 7 ft. high, per doz., 6s., 12s., 18s., 30s., 42s. and upwards.		
— pyramids, up to 8 ft. high, each 10s. 6d. to	42	0
— ARGENTEA (Silver-striped Box)		
— — pyramids, up to 8 ft. high		
— AUREA (Gold-striped Box)		
— — pyramids, up to 8 ft. high		
For sizes and prices of these two varieties, see B. sempervirens.		
— LATIFOLIA NOVA (New Broad-leaved Box) each 1s. 6d. to	3	6
— VARIEGATA NOVA (New Silver-striped Box) each 1s. 6d. to	3	6
— MYRTIFOLIA (Myrtle-leaved Box), per doz. 18s. to 42s. and upwards.		

Hardy Shrubs.

	s.	d.
CALYCANTHUS.—ALLSPICE. *See* also Chimonanthus (*p.* 23).		
FERTILIS - - each	1	6
FLORIDUS (Carolina Allspice - - - each	1	6
LÆVIGATUS - - ,,	1	6
PRÆCOX - - - ,,	1	6
CEANOTHUS.		
AZUREUS - - - ,,	2	6
GRANDIFLORUS - ,,	2	6
DIVARICATUS - ,,	1	6
CERASUS.—CHERRY.		
LAUROCERASUS. *See* Common Laurel (*p.* 27).		
LUSITANICA. *See* Portugal Laurel (*p.* 27).		
VULGARIS FLORE-PLENO (Double-fld. Cherry), dwarfs - - each	1	0
CERCIS.—JUDAS TREE.		
SILIQUASTRUM - each	1	0
CHAMÆROPS.		
FORTUNEI (Chusan Palm) - - each	1	6
HUMILIS - - ,,	1	6
CHIMONANTHUS.		
FRAGRANS (Calycanthus præcox), - - each	1	6
CHIONANTHUS.—SNOW FLOWER.		
VIRGINICA (Fringe Tree) each	1	6
CISTUS.		
LADANIFERUS (Gum Cistus), per doz. 9s. to	12	0
One of the most splendid of flowering shrubs, its white flowers being marked with rich crimson spots at the base.		
LAURIFOLIUS - per doz.	6	0
OTHER KINDS, in pots, per doz. 6s., 9s. and	12	0

	s.	d.
CLETHRA.		
ACUMINATA - - each	1	6
ALNIFOLIA - - ,,	1	6
COLUTEA—BLADDER SENNA.		
ARBORESCENS per doz.	6	0
— CRUENTA - ,,	6	0
POCOCKII (haleppica) per doz.	6	0
COMPTONIA.		
ASPLENIFOLIA (Fern-leaved Gale), - each	1	6
CORCHORUS. *See* KERRIA (*p.* 27).		
CORNUS.—DOGWOOD.		
ALBA (Scarlet Dogwood) per doz.	4	0
per 100	21	0
Valuable in planting shrubberies, on account of the bright coral-red colour of its bark.		
MASCULA (Cornelian Cherry) - per doz.	6	0
— VARIEGATA - each	1	6
SIBERICA VARIEGATA ,,	1	6
CORYLUS.—HAZEL.		
AVELLANA		
— PURPUREA		
per doz. 12s. and	18	0
— — 4 to 5 ft. 18s. to	30	0
— PENDULA - - each	3	6
COTONEASTER.		
AFFINIS - - each	1	0
MICROPHYLLA per doz.	6	0
SIMONSII - ,,	6	0
THYMIFOLIA ,,	6	0
WHEELERII ,,	6	0
CRAB. *See* PYRUS (*p.* 18).		
CRATÆGUS. *See also p.* 15.		
PYRACANTHA, in pots, per doz.	12	0
— FRUCTU-LUTEO (yellow-berried), per doz.	12	0

Hardy Shrubs.

	s.	d.
CURRANT. *See* RIBES (*p.* 30).		
CYDONIA. *See* PYRUS (*p.* 29).		
CYTISUS.		
ALBUS (Portugal Broom) per doz.	4	0
per 100	20	0
SCOPARIUS (Common Broom), strong and well rooted per doz.	3	0
per 100	21	0
— PALLIDUS, in pots, per doz. 6s. and	9	0
DAPHNE.		
The flowers of these pretty low shrubs are remarkably fragrant.		
CNEORUM - - per doz.	12	0
— MAJOR - - „	18	0
— VARIEGATA - „	12	0
MEZEREUM (Red Mezereon), per doz. 12s. to	18	0
— ALBA (White Mezereon), per doz. 12s. to	18	0
PONTICA, strong per doz. 12s. to	18	0
DESFONTAINEA.		
SPINOSA - - each	2	6
DESMODIUM.		
PENDULIFLORUM each	1	6
DEUTZIA.		
CANDIDISSIMA FL. PL. per doz.	9	0
CRENATA FLORE PLENO per doz.	6	0
— FORTUNEI „	12	0
GRACILIS - - each	1	0
per doz.	6	0
SCABRA each 1s., per doz.	6	0
DIMORPHANTHUS.		
MANDCHURICUS each 1s. 6d. to	3	6
DIMORPHANTHUS—*continued.*		
A hardy tree, with palm-like habit, and Aralia-like foliage.		
ELÆAGNUS.—OLEASTER.		
JAPONICA VARIEGATA each	1	6
ELDER. *See* SAMBUCUS (*p.* 30).		
ESCALLONIA.		
MACRANTHA, in pots, per doz.	6	0
MONTEVIDENSIS, in pots, each	1	0
RUBRA, in pots „	1	0
EUGENIA.		
UGNI - - - each	1	6
EUONYMUS.—SPINDLE TREE.		
JAPONICUS - per doz.	12	0
— LATIFOLIUS ALBO-VARIEGATUS, per doz.	12	0
— — AUREO-VARIEGATUS - - - per doz.	12	0
— — FLAVESCENS each	1	6
RADICANS VARIEGATUS per doz.	6	0
EXOCHORDA.		
GRANDIFLORA (Spiræa grandiflora), per doz.	18	0
FABIANA.		
IMBRICATA - - each	1	6
FILBERT. *See* CORYLUS (*p.* 23).		
FORSYTHIA.		
FORTUNEI - per doz.	12	0
Very free-growing and of trailing habit, like *F. suspensa;* will rapidly cover a wall from 10 to 20 ft. high.		
SUSPENSA - - per doz.	12	0
A handsome profuse-flowering free-		

Hardy Shrubs.

FORSYTHIA—*continued.* *s.* *d.*

growing trailing shrub, perfectly hardy.

VIRIDISSIMA, strong per doz., 6s. and 9 0

FOTHERGILLA.

ALNIFOLIA - - each 1 0

FRINGE TREE. *See* CHIONANTHUS (*p.* 23).

FURZE. *See* ULEX (*p.* 31).

GALE. *See* MYRICA (*p.* 28).

GALE, FERN-LEAVED. *See* COMPTONIA (*p.* 23).

GARRYA.

ELLIPTICA - - - each 1 6

A handsome evergreen shrub, suitable for covering walls, and very ornamental, from the profusion of its graceful catkins, which are often from 8 in. to 1 ft. long, produced in mid-winter.

GENISTA. *See* CYTISUS (*p.* 24).

GORDONIA.

LASIANTHUS - each 2 6

GUELDRES ROSE. *See* VIBURNUM (*p.* 31).

HALESIA.

TETRAPTERA (Snowdrop Tree), - - each 1 6

HAMAMELIS.—WYCH HAZEL.

VIRGINICA - - each 1 6

HIBISCUS.

SYRIACUS (Althœa frutex) of sorts, per doz. 12s. and 18 0

— FLORE-PLENO, of sorts, per doz. 12s. and 18 0

HIBISCUS—*continued.* *s.* *d.*

The *Althœa frutex* is one of the most ornamental of flowering deciduous shrubs, producing its large and beautifully-coloured mallow-like flowers in the months of August and September. It grows well in smoky districts, and is hence specially valuable. The double-flowered varieties of this are some of the finest of all the hardy deciduous shrubs which are cultivated for the beauty of their blossoms.

HOLLY. *See* ILEX (*pp.* 26 and 27).

HONEYSUCKLE. *See* LONICERA (*p.*).

HYDRANGEA.

OTAKSA - - - each 1 6

JAPONICA VARIEGATA ,, 1 6

A fine variegated-leaved plant.

PANICULATA GRANDIFLORA, each 1s. 6d. to 2 6

A low, deciduous shrub of a highly ornamental character, bearing great pyramidal panicles 1 ft. in depth, and 2 ft. in circumference, crowded with large white flowers. It is unquestionably one of the finest hardy deciduous plants known.

Hardy Shrubs.

HYPERICUM.—St. John's Wort.	s.	d.
CALYCINUM (Aaron's Beard), - per 100	8	0
— nice clumps, per doz.	4	0
per 100	21	0
URALUM - - - each	1	0

ILEX.—Holly.

The first place amongst ornamental evergreen shrubs must be given to the Holly and its varieties, of which the finest stock of all kinds and sizes to be found in Europe will be met with in this nursery. All the handsomer kinds of Variegated Hollies, from 3 ft. to 8 ft. or 10 ft. in height, are here grown by thousands. The plants should be seen, and the prices obtained on the spot, as it is impossible by description to convey any adequate idea of the beauty of the plants.

Green Hollies.

	s.	d.
Aquifolium (Common Green Holly), for hedges, stout and finely rooted, 1½ ft. high per 100 21s. to	25	0
— 2 to 2½ ft. per 100 42s. and	63	0
— 3 to 3½ ft. per 100, 100s. to	150	0

— 4, 5, 6, 8 to 9 ft., thousands of most beautiful pyramids, per doz. 24s. to 120s., and upwards.

— fine plants, 10, 12 to 14 ft. high, 15 to 20 ft. in circumference, moved since August last.

— ANGUSTIFOLIA.

— HODGINSII.

— LAURIFOLIA.

MYRTIFOLIA.

SCOTICA.

These varieties of Green Holly are recommended as being among the most useful and beautiful hardy evergreens in cultivation. We have thousands of them, 3, 4, 5, 6, 7, to 8 ft. high, at from 42s. to 120s. per doz., and upwards.

ILEX—*continued.*	s.	d.
Aquifolium fructu-luteo (Yellow-berried Holly), and other sorts, per doz. 30s. to	60	0

Variegated Hollies.

	s.	d.
The best varieties from 2 to 3 ft. high, per doz. 18s. to	30	0
— 4 to 5 ft. - per doz.	60	0

— 5, 6, to 8 ft., and 10 ft., 7s. 6d. to 21s. each, and upwards.

Of the following specially choice varieties of Holly we have splendid **Pyramidal Specimens,** by hundreds, all finely-shaped and densely-furnished, ILEX—*continued.* *s.* *d.*

and which should be seen to be appreciated. They are recommended as being among the choicest of plants for winter gardens, terrace gardens, and specimens on lawns:—

— Waterer's
— Golden Queen } dwarfs and pyramids.
— Silver Queen

The following are offered as magnificent **Standard Plants,** with full compact round well-balanced heads. They have stems from 5 to 6 ft. high, and the heads measure from 6 to 10 ft. in circumference, and are so densely clothed with foliage that it is impossible to see through them. They are specially adapted to form the leading features of a winter garden of evergreens.

Aquifolium,
— Waterer's
— Golden Queen } stands.
— Silver Queen
— Perry's Weeping, standards, each 10s. 6d. to 21 0
— New Golden Weeping - - - each 21 0

***** Our stock of Specimen and Standard Variegated Hollies is superior to that in any other Nursery, having for many years received special attention. The variety called Waterer's Holly originated here, and our plants of both it and the Golden Queen are altogether unmatched, either as to size or condition, or as to fitness for removal.**

ILEX—*continued.* *s.* *d.*

IVY. *See* Hedera (*p.* 34).

JASMINE. *See* Jasminum (*p.* 34).

JUDAS TREE. *See* Cercis (*p.* 23).

KERRIA.
japonica variegata each 1 0
— flore-pleno „ 1 0

LAUREL.
common, 2 ft., per 100 16 0
— 2 to 2½ and 3 ft. per 100, 21s. to 30 0
— 3 to 4 ft. - per 100 40 0
All stout and well-rooted plants.
Bertinii - per doz. 12 0
A fine broad-leaved variety.
Caucasian, nice young plants, - - per doz. 6 0
per 100 40 0
This is really a grand acquisition.
Colchicum per doz. 6s. and 12 0
Portugal, 2 to 2½ and 3 ft., per 100, 30s. to 63 0
— 3 to 5 ft. per doz. 12s. to 30 0
All fine, healthy, and good rooted plants.
rotundifolia per doz. 12 0
A very distinct variety of Common Laurel.

LAURUS.—Bay Tree.

Hardy Shrubs.

LAURUS—*continued.*	*s.*	*d.*
NOBILIS (Sweet Bay), per doz. 18s. to	30	0
LAVANDULA.—LAVENDER.		
SPICA - - per doz.	3	0
LAVENDER. *See* LAVANDULA (*p.* 28).		
LAVENDER COTTON. *See* SANTOLINA (*p.* 30).		
LEYCESTERIA.		
FORMOSA - - each	1	0
per doz.	6	0
LIGUSTRUM.—PRIVET.		
AMURENSE - per doz.	3	0
CORIACEUM - - each	1	6
JAPONICUM (Japan Privet), - - per doz.	12	0
LATIFOLIUM ROBUSTUM per doz.	18	0
A new and fine variety.		
LUCIDUM (Chinese Privet), - per doz.	6	0
VARIEGATUM - - each	1	6
VULGARE		
— BUXIFOLIUM (Box-leaved Privet), strong per 100, 10s. to	15	0
— OVALIFOLIUM, 2 ft. per 100,	15	0
— — 3 to 5 ft. per doz.	6	0
per 100,	40	0
— SEMPERVIRENS (Common Evergreen Privet), strong, per 100, 10s. to	15	0
Good for hedges or coverts.		
LILAC. *See* SYRINGA (*p.* 30).		
LYCIUM.—BOX THORN.		
BARBARUM (Duke of Argyll's Tea-tree) each	1	0

MAGNOLIA.	*s.*	*d.*
ACUMINATA - - -	3	6
CAMPBELLI, strong, each	21	0
CONSPICUA (Yulan) each 3s. 6d. to	5	0
— SOULANGEANA each 3s. 6d. to 5s. &	7	6
— LENNE - - each	5	0
This is probably the finest Magnolia in existence.		
CORDATA - - each	2	6
GLAUCA each 2s. 6d. to	3	6
— THOMSONIANA each 3s. 6d. to	5	0
GRANDIFLORA each 3s. 6d. to	7	6
— fine flowering plants, 6, 7, and 8 ft., 21s. each and upwards.		
— EXONIENSIS (Exmouth Magnolia) each 2s. 6d. to	7	6
— FERRUGINEA each 2s. 6d. to	7	6
— GALLISSONIENSIS each 3s. 6d. to	7	6
PURPUREA per doz. 18s. to	30	0
— GRACILIS - - each	2	6
TRIPETALA (Umbrella Tree), each 1s. 6d. to	5	0
MAHONIA. *See* BERBERIS (*p.* 22).		
MYRICA.—CANDLEBERRY MYRTLE.		
CERIFERA - - per doz.	9	0
GALE (Sweet Gale) ,,	9	0
OAK. *See* QUERCUS (*pp.* 19 and 29).		
ORANGE, MOCK. *See* PHILADELPHUS (*p.* 29).		
OSMANTHUS.		
AQUIFOLIUM - - each	1	6
— OVALIFOLIUS ,,	1	6
— VARIEGATUS ,,	1	6

Hardy Shrubs.

PÆONIA.	s.	d.
Moutan (Tree Pæony), blooming plants per doz. 30s. to	60	0

PÆONY.—*See* PÆONIA (*p.* 29).

PALM, CHUSAN. *See* CHAMÆROPS (*p.* 23).

PAVIA. *See also p.* 17.	s.	d.
CALIFORNICA - per doz.	18	0
MACROSTACHYA ,,	18	0

PHILADELPHUS.—Mock Orange.	s.	d.
CORONARIUS - per doz.	6	0
— AUREA - - each	1	6
— FLORE-PLENO per doz.	6	0
Gordonianus per doz. 6s. to	9	0
OTHER SPECIES per doz. 6s. to	9	0

PHILLYREA.

BUXIFOLIA per doz. 12s., 18s., 30s., and upwards.

Larger plants of the above up to 5 ft. or 6 ft..

ILICIFOLIA (spinosa), per doz. 12s., 18s., 30s., and upwards.

PHOTINIA.	s.	d.
SERRULATA - - - each	1	6

PRINOS.—Winter Berry.	s.	d.
GLABER - - per doz.	18	0

PRIVET. *See* LIGUSTRUM (*p.* 28).

PRUNUS.	s.	d.
CALIFORNICA - - each	2	6

This is amongst shrubs what the Snowdrop is amongst flowers—the first to unfold its leaves and blossoms. It is never injured by the weather.

PRUNUS—*continued.*	s.	d.
JAPONICA MULTIPLEX (Double Dwarf Almond) - - per doz.	12	0
SINENSIS FLORE-PLENO per doz. 12s., each	1	6
TRILOBA - - - each	1	6

PTELEA.	s.	d.
TRIFOLIATA - - - each	1	0

PYRUS.	s.	d.
JAPONICA (Japan Quince), per doz. 6s. to	12	0
— FLORE-PLENO per doz.	12	0
— ALBA - - - ,,	12	0
— ROSEA - - ,,	12	0

QUERCUS. *See also p.* 19.	s.	d.
Ilex (Evergreen Oak) per doz. 18s. to	24	0
— in pots per 100 £5	0	0

An exceedingly useful evergreen, invaluable for the furnishing of pleasure grounds near the sea-coast.

RHAMNUS.—Buckthorn.	s.	d.
Billardii - - each	1	6
LATIFOLIUS - - ,,	1	6
SEMPERVIRENS - ,,	1	0

RHAPHIOLEPIS.	s.	d.
OVATA - - ,,	1	6

RHODOTYPUS.	s.	d.
KERRIOIDES - ,,	1	6

RHUS.—Sumach.	s.	d.
Cotinus (Venus Sumach), per doz. 12s., each	1	6
ELEGANS - ,,	1	6
GLABRA (Scarlet Sumach) each	1	6
— LACINIATA (Fern-leaved Sumach) per doz. 12s. to	18	0
each	1	6

One of the most beautiful of hardy

Hardy Shrubs.

RHUS—*continued.*	*s.*	*d.*
plants, with elegantly cut leaves.		
OSBEKII - - each	2	0
TOXICODENDRON per doz.	12	0
TYPHINA (Stag's-horn Sumach), per doz. 6s. to 12s. and	18	0
VERNIX - - each	1	6
RIBES.		
ALBIDUM - - per doz.	6	0
AUREUM - per doz.	6	0
each	1	0
CONSPICUUM - ,,	1	0
SANGUINEUM (Flowering Currant), per doz.	6	0
each	1	0
— FLORE-PLENO ,,	1	0
ROSA.—ROSE.		
RUBIGINOSA (Sweet Briar), strong per 100 10s. to	16	0
SAMBUCUS.—ELDER.		
NIGRA AUREA - per doz.	12	0
The leaves of this variety are of a rich deep golden hue throughout the season, which makes it very effective amongst other shrubs.		
— ARGENTEO-VARIEGATA per doz.	12	0
— AUREO-VARIEGATA per doz.	12	0
RACEMOSA (Scarlet Elder) per doz.	6	0
SANTOLINA.		
CHAMÆCYPARISSUS (Lavender Cotton) per doz.	6	0
SENNA, BLADDER. *See* COLUTEA (*p.* 23).		
SKIMMIA.		
JAPONICA, strong per doz. 12s. to	18	0

SKIMMIA—*continued.*	*s.*	*d.*
OBLATA per doz. 12s. to	18	0
— larger each 2s. 6d. to	3	6
SNOWBERRY. *See* SYMPHORICARPOS (*p.* 30).		
SNOWDROP TREE. *See* HALESIA (*p.* 25).		
SNOW FLOWER. *See* CHIONANTHUS (*p.* 23).		
SPARTIUM.		
JUNCEUM (Spanish Broom), per doz. 6s., per 100	30	0
SPIRÆA.		
ARIÆFOLIA - per doz.	6	0
each	1	0
CALLOSA - per doz.	6	0
each	1	0
PRUNIFOLIA FLORE-PLENO - - per doz.	6	0
MANY OTHER SORTS per doz.	6	0
STUARTIA.		
MALACHODENDRON (pentagynia) - - each	3	6
VIRGINICA - - ,,	3	6
SUMACH. *See* RHUS (*p.* 29).		
SWEET BRIAR.		
Strong— per 100, 10s. 6d. to	16	0
SYMPHORICARPOS.		
RACEMOSUS (Snowberry) per doz.	4	0
OTHER SORTS ,,	4	0
SYRINGA.—LILAC.		
EMODI - - - each	1	0
JOSIKÆA - - - ,,	1	0
PERSICA (Persian Lilac), 2 to 3 ft. high, bushy per doz. 6s. to 12s.; per 100, 40s. to	75	0
ROTHOMAGENSIS (Siberian Lilac), 2, 3, to 4 ft. high, bushy, per doz. 6s., 9s., and 18s.; per 100, 40s. to	100	0

SYRINGA—*continued.*	*s.*	*d.*
VULGARIS (Common Purple Lilac), per doz. 6s., 9s. and 12s.; per 100, 40s. to	75	0
— ALBA (Common White Lilac), per doz. 6s., 9s. and 12s.; per 100, 40s. to	75	0
— CHARLES X. per doz.	12	0
— DR. LINDLEY ,,	12	0
The following are a selection of new Lilacs, which are well worth cultivating:—		
ALBA GRANDIFLORA, very fine - - each	3	6
AMBROISE VERSCHAFFELT BLANC VIRGINAL DR. NOBLE FLORE-PLENO GOLIATH GLOIRE DE MOULINS INSIGNIS RUBRA LAVANENSIS NIGRICANS OBLATA VILLE DE TROYES per doz. in variety,	12	0
TAMARIX.—TAMARISK.		
JAPONICA - - per doz.	4	0
GERMANICA per doz. 6s., per 100,	21	0
— TETRANDRA PURPUREA - - per doz.	4	0
ULEX.—FURZE.		
EUROPÆUS FLORE-PLENO, strong, in pots, per doz. 6s.; per 100, 30s. to	50	0
— — HISPANICA (Spanish Furze), in pots, per doz.	6	0
— STRICTUS (Irish Furse), in pots per doz.	6	0
VIBURNUM.		
JAPONICUM - - - each	2	6
MACROCEPHALUM ,,	1	6
OPULUS (Gueldres Rose), per doz. 6s. to	9	0
PLICATUM - - each	1	6
TINUS (Laurustinus), 1½ ft., and bushy per doz. 9s. and	12	0
— larger per doz. 18s., 30s. to	42	0
SEVERAL OTHER SORTS, per doz. 6s. to	9	0
WEIGELA.		
AMABILIS - - each	1	0
— VARIEGATA - ,,	1	0
HORTENSIS NIVEA ,,	1	0
A fine pure white variety, very free-flowering and beautiful.		
LAVALLEI - - each	1	6
ROSEA, per doz. 9s., ,,	1	0
— NANA VARIEGATA ,,	1	0
OTHER SORTS - - each	1	0
YUCCA.—ADAM'S NEEDLE.		
FILAMENTOSA - each	1	6
GLORIOSA each 3s. 6d. to	7	6
RECURVIFOLIA each 2s. 6d. to	5	0

HARDY CLIMBERS, WALL PLANTS, &c.

Plants of Climbing or trailing habit are amongst the requisites of a well-furnished garden. They not only display beauties of their own, but they also serve in many cases to screen unsightly objects, or to cover the bare and exposed surfaces of walls and buildings.

AKEBIA.	s.	d.
QUINATA - - each	1	6
AMPELOPSIS.		
HEDERACEA (Virginian Creeper), strong, per doz. 6s. to 9s., each	1	0
— 8 to 10 ft. per doz. 12s. to	18	0
— 10 to 12 ft., very stout, in pots, per doz. 24s. to	30	0
JAPONICA - - each	1	6
VEITCHII (tricuspidata), strong, per doz. 12s. to	18	0
The leaves of this variety turn bright red in autumn, and the whole plant has a peculiarly graceful and refined character.		
ARISTOLOCHIA.		
SIPHO - - - each	1	6
BERBERIS.—BERBERRY.		
DARWINII - - each	1	0
STENOPHYLLA - ,,	1	6
BERBERIDOPSIS.		
CORALLINA - - ,,	2	6
BIGNONIA.		
RADICANS LUTEA ,,	1	6
— MAJOR - - ,,	1	6
Grand deciduous woody climbing plants.		
GRANDIFLORA PRÆCOX each	2	6
CEANOTHUS.		
AZUREUS - - - ,,	2	6
DIVARICATUS - ,,	1	6

CELASTRUS.	s.	d.
SCANDENS - - ,,	1	0
CHIMONANTHUS.		
FRAGRANS - - each	1	6
CLEMATIS—(VIRGIN'S BOWER).		
FLAMMULA, strong, each	1	0
The Sweet-scented Clematis, fragrant as a Hawthorn.		
FLORIDA - - each	1	6
— FLORE-PLENO ,,	1	6
— SIEBOLDII - ,,	1	6
FORTUNEI - - ,,	1	6
GEM - - - ,,	1	6
GLOIRE DE ST. JULIEN each	1	6
HELENA - - ,,	1	6
HENDERSONII - ,,	1	6
JACKMANNII per doz. 12s., each	1	6
JEANNE D'ARC - each	2	6
JOHN GOULD VEITCH ea.	2	6
LADY BOVILL - each	1	6
LADY CAROLINE NEVILL each	2	6
LANUGINOSA - per doz.	12	0
each	1	6
— CANDIDA - - ,,	1	6
— NIVEA - - ,,	1	6
LORD LONDESBOROUGH each	2	6
LUCIE LEMOINE - ,,	2	6
MISS BATEMAN - ,,	2	6
MONTANA - ,,	1	6
MRS. JAMES BATEMAN each	2	6
OTTO FRŒBEL - ,,	2	6

CLEMATIS—*continued.*		*s.*	*d.*
PATENS (cœrulea; azurea grandiflora)	each	1	6
Prince of Wales	,,	1	6
Renaultii CŒRULEA GRANDIFLORA	each	2	6
RUBELLA	per doz.	12	0
	each	1	6
RUBRO-VIOLACEA	,,	1	6
Sophia	,,	1	6
— FLORE-PLENO	,,	1	6

CLEMATIS—*continued.*		*s.*	*d.*
Standishii	each	1	6
Star of India	,,	2	6
Thomas Moore	,,	2	6
TUNBRIDGENSIS	,,	2	6
VELUTINA PURPUREA	,,	2	6
Viticella	,,	1	0
— DOUBLE PURPLE	,,	1	6
— VENOSA	,,	1	6
— RUBRA GRANDIFLORA	each	2	6

The varieties of Clematis have now become so numerous, that we have made a selection of those which, from personal knowledge, we believe to be the most desirable for general cultivation. The modern varieties have been wonderfully improved not only as regards the size and colours of their flowers, but also in their habit and continuity of blooming, so that they are really unrivalled amongst hardy flowering woody climbers. The summer and autumn-bloomers have an exceedingly good effect when planted to grow over masses of rootwork, but the earlier sorts are better adapted for walls or corridors.

The spring-blooming sorts should have the wood of the previous year's growth trained in for flowering; but in the case of the summer and autumn-blooming varieties, those of the Lanuginosa type are the better for moderate annual pruning, while those of the Jackmanni type require to be cut back still more closely. All these latter being successional bloomers, require to be liberally manured.

☞ *The three best Clematis yet in commerce are Rubella, Jackmannii, and Lanuginosa.*

We can also supply any varieties in the trade not enumerated above, at the current prices.

COTONEASTER.		*s.*	*d.*
MICROPHYLLA	per doz.	6	0
Simonsii	,,	6	0
CRATÆGUS.			
Pyracantha	each	1	6
— FRUCTU-LUTEO (Yellow-fruited)	each	1	6
ESCALLONIA.			
MACRANTHA	,,	1	0
MONTEVIDENSE	,,	1	0
PTEROCLADON	,,	1	0
RUBRA	,,	1	0

EUGENIA.		*s.*	*d.*
APICULATA	each	1	0
Ugni	,,	1	0
GARRYA.			
ELLIPTICA	,,	2	6
HEDERA.—Ivy.			
CANARIENSIS (Irish Ivy), strong, per doz. 6s. to 12s.; per 100, 30s. to		60	0
— for edging	per 100	21	0
— LATIFOLIA MACULATA	each	1	6

Hardy Climbers, &c.

HEDERA—*continued.*	*s.*	*d.*
COLCHICA (Rœgneriana), per doz.	12	0
each	1	6
HELIX CHRYSOCARPA (Yellow-fruited Ivy), per doz.	12	0
each	1	6
— PALMATA - „	1	6
— SILVER STRIPED „	1	6
RHOMBEA VARIEGATA „	1	6
OTHER SORTS - per doz.	12	0
each	1	6
JASMINUM.—JASMINE.		
CHRYSANTHEMUM - each	1	0
FRUTICANS - „	1	0
NUDIFLORUM - „	1	0
OFFICINALE (White Jasmine), - each	1	0
REVOLUTUM - „	1	0
WALLICHIANUM (pubigerum) - - each	1	0
LONICERA.—HONEYSUCKLE.		
BRACHYPODA - „	1	0
— AUREO-RETICULATA „	1	0
FLEXUOSA - - „	1	0
FLORIBUNDA - „	1	6
FRAGRANTISSIMA „	1	6
GRATA (Evergreen Honeysuckle) - per doz.	9	0
each	1	0
MAGNEVILLEA - „	1	6
PERICLYMENUM BELGICUM (late Dutch Honeysuckle), per doz.	6	0
SEMPERVIRENS		
— NEW SCARLET TRUMPET, - - each	1	0
— FLAVA (Yellow-Trumpet Honeysuckle) each	1	6
LIGUSTRUM.		
JAPONICUM (Japan Privet), - per doz.	12	0
each	1	6

MAGNOLIA.	*s.*	*d.*
GRANDIFLORA each 3s. 6d. to	7	6
— EXONIENSIS (Exmouth Magnolia), each 3s. 6d. to	7	6
— FERRUGINEA each 3s. 6d. to	7	6
MENISPERMUM.—MOON-SEED.		
CANADENSE - each	1	0
PASSIFLORA.—PASSION FLOWER.		
CŒRULEA - each	1	6
NEWMANNI - „	1	6
PERIPLOCA.		
GRÆCA - - „	1	0
PYRUS.—JAPAN QUINCE.		
JAPONICA - „	1	0
— ROSEA - „	1	6
— ALBA . - „	1	0
— FLORE-PLENO „	1	6
ROSA.—ROSE.		
BANKSIÆ (White Banks' Rose) - per doz.	12	0
each	1	6
— LUTEA (Yellow Banks' Rose) - per doz.	12	0
each	1	6
FORTUNIANA (Fortune's Yellow Rose) - each	1	6
GLOIRE DE DIJON „	1	6
CLOTH OF GOLD „	1	6
MARECHAL NIEL „	1	6
The finest yellow Rose in cultivation.		
CLIMBING DEVONIENSIS each	1	6
SEMPERVIRENS and AYRSHIRE, of sorts per doz. 6s. and	12	0
RUBUS.—BRAMBLE.		
FRUTICOSUS BELLIDIFLORUS - per doz.	12	0
— FLORE-ALBO-PLENO per doz.	12	0

RUBUS—*continued.*		*s.*	*d.*
LEUCODERMIS -	each	1	6
LACINIATUS -	per doz.	12	0
OTHER SORTS	,,	12	0

STAUNTONIA.		*s.*	*d.*
LATIFOLIA -	each	1	6

WISTARIA.		*s.*	*d.*
SINENSIS,	each 1s. 6d. to	3	6
— ALBA	,, 2s. 6d. to	3	6

LILIUMS.

Lilium auratum.—This fine plant is rarely, perhaps, seen to greater advantage, or more effectively placed, than when planted amongst Rhododendrons. It does not appear to be generally known that this Lily is, in every sense of the words, A PERFECTLY HARDY BULB. We have had it planted in our American ground for years, and never saw it injured by the winter.

We supply good sound blooming bulbs at 18*s.*, 30*s.*, 42*s.*, 60*s.*, *and* 120*s. per doz.*

☞ These Bulbs have been grown from Seeds and Scales in our own Nursery, and are immensely to be preferred to the imported bulbs, which generally prove unsatisfactory.

LILIUM AURATUM,	*s.*	*d.*
per doz. 18s., 30s., 42s., and	60	0

These have been raised from scales or from seeds in this nursery, and are, of course, much to be preferred to imported bulbs. We believe this Lily to be as hardy as a Snowdrop.

LILIUM SPECIOSUM,	*s.*	*d.*
per doz. 42s. to	60	0

This is the true L. speciosum, and by far the handsomest form of that species.

		s.	*d.*
—— ALBUM -	per doz.	12	0
—— RUBRUM	,,	12	0

HARDY HERBACEOUS PLANTS.

We add below a few really good things, which should find a place in every garden where there is space to introduce them.

	s.	*d.*
Anemone Honorine Jubert - - each	1	6
Arundo conspicua per doz. 12s. to	18	0
Cypripedium spectabile each	2	6
Delphinium Barlowi (true), - per doz.	12	0
— Belladonna, per doz.	12	0
— grandiflorum, - each	1	6
— Keteleerii, - ,,	1	6
— Madame Richlet ,,	1	0
— magnificum, per doz.	6	0
These are some of the finest herbaceous plants known.		
Dielytra spectabilis per doz.	6	0
Dodecatheon Meadia giganteum, - per doz.	6	0
Fraxinella, Red ,,	6	0
— White - ,,	6	0
Gentiana acaulis ,,	6	0
Gladiolus brenchleyensis, strong blooming bulbs - per 100	20	0
The finest of all the Gladioli for masses.		
Gynerium argenteum (Pampas Grass), strong each	1	6
— variegatum - per doz.	30	0
Helleborus niger ,,	12	0
— olympicus - ,,	12	0
Hepatica angulosa ,,	12	0
— Double Red ,,	9	0
— other sorts ,,	9	0

	s.	*d.*
Lily of the Valley, strong flowering roots per doz.	6	0
— variegated - ,,	12	0
Lithospermum prostratum, strong - per doz.	12	0
Osmunda regalis, very strong plants per doz. 18s. to	84	0
Pæonia, varieties of officinalis, anemoniflora, Humei, Potsii, and 7 or 8 other kinds, strong flowering roots ea.	1	0
per doz. 9s.; per 100,	63	0
Primrose, Double White, per doz.	6	0
— Double Yellow, strong roots, - per doz.	6	0
— other sorts ,,	6	0
Spigelia Marylandica per doz.	18	0
Spiræa Aruncus, - each	1	0
per doz.	9	0
— japonica - each	1	0
per doz.	6	0
— palmata - each	1	6
— venusta - - ,,	1	0
per doz.	9	0
Trilium grandiflorum each	1	6
Tritoma Uvaria, per doz.	6	0
Violets, of sorts ,,	4	0
Yucca gloriosa each 3s. 6d. to	7	6
— recurvifolia each 2s. 6d. to	7	6
— filamentosa - each	1	6

THE END.

BILLING AND SONS, PRINTERS, GUILDFORD, SURREY.

REVISED LIST OF PRICES

FOR

CONIFERS.

RICHARD SMITH WORCESTER
NURSERIES ST. JOHNS SEED WAREHOUSE CORNER OF HIGH ST. & BROAD ST
V R
HONI SOIT MAL Y PENSE
DIEU ET MON DROIT
R S

1875.

London: R. E. TAYLOR, Printer,] [19, Old Street, Goswell Road, E.C.

In these Nurseries 50 acres are devoted exclusively to the cultivation of Fruit Trees; 50 acres to Conifers and other Evergreens; 12 acres to Rose Trees; and a proportionally large space to each other division of Useful or Ornamental Shrubs, Forest Trees, &c., requiring 32 miles of walks for the convenience of attending to the Stock, and 2½ acres of glass to rear the young plants.

CONIFERS.

REVISED LIST OF PRICES FOR 1875,

FROM THE LAST EDITION OF RICHARD SMITH'S DESCRIPTIVE CATALOGUE OF THE FIR TRIBE, WHICH MAY BE HAD ON APPLICATION, PRICE SIXPENCE.

N.B.—ALL THE PLANTS OFFERED IN THIS LIST ARE CAREFULLY PRUNED AND TRAINED, LIFTED EVERY OTHER SEASON, AND GROWN SINGLY TO MAKE HANDSOME SPECIMENS.

When one plant only is taken where quotations are given for the dozen, it will be charged at a slightly higher rate; and when taken by the dozen in instances where priced singly, a proportionate reduction will be made.

NOTE.—The figures in the first column denote the page in the Descriptive List of the Fir Tribe.

			Each. s.	d.	Doz. s.	d.
	ABIES—					
	acicularis	6 in.	2	6		
6	ajanensis	9 in.	2	6		
3	alba	1½ to 2 ft.	0	6		
	—″—	2 ,, 2½ ft.	1	0		
3	—″— cærulea	2/6 to	3	6		
3	—″— glauca	12 to 15 in.	3	0		
3	Alcoquiana	6 ,, 9 in.	3	6		
	calicularis	6 in.	2	6		
4	canadensis	6 to 7 ft.	2	0	21	0
	—″—	7 ,, 8 ft.	3	0	30	0
	—″—	8 ,, 10 ft.	5	0	50	0
4	Douglasii	1 ,, 1½ ft.	0	9	7	0
	—″—	1½ ,, 2 ft.	1	0	10	0
	—″—	2 ,, 3 ft.	1	6	15	0
	—″—	3 ,, 4 ft.	2	0	21	0
	—″—	4 ,, 5 ft.	2	6	24	0
	—″—	5 ,, 6 ft.	3	6	36	0
	—″—	6 ,, 7 ft.	5	0	52	0
	—″—	7 ,, 8 ft.	6	0	60	0
	—″—	8 ,, 10 ft.	7	6	72	0
	—″—	10 ,, 12 ft.	9	0	80	0
	—″—	12 ,, 15 ft.	12	6	100/-	
4	Engelmanni	6 ,, 9 in.	1	6		
	—″—	9 ,, 12 in.	2	0		
	—″—	12 ,, 15 in.	2	6		
	—″—	15 ,, 18 in.	3	6		
4	excelsa	1 ,, 1½ ft.	..		3	0
	—″—	1½ ,, 2 ft.	..		4	0
	—″—	2 ,, 3 ft.	..		6	0
	—″—	3 ,, 4 ft.	1	0	9	0
	—″—	4 ,, 5 ft.	1	3	12	0
	—″—	5 ,, 6 ft.	2	0		
4	—″— attenuata	6 in.	1	6		
5	—″— brevifolia	6 to 9 in.	2	0		
5	—″— Clanbrasiliana,	6 ,, 9 in.	2	6		
	—″— —″—	9 ,, 12 in.	3	6		
	—″— —″— fine specimens,	5/-, 7/6 to	21	0		
5	—″— —″— stricta	6 to 9 in.	2	6		
	—″— —″— —″—	9 ,, 12 in.	3	6		
	—″— —″— strong	5/- to	7	6		
5	—″— elegans	2 to 2½ ft.	2	6		
	—″— —″—	2½ ,, 3 ft.	3	6		
	ABIES—					
	excelsa eremita	6 in.	1	6		
5	—″— Gregoryi	2/6 to	5	0		
5	—″— inverta	12 to 15 in.	1	6		
	—″— —″—	15 ,, 18 in.	2	0		
	—″— —″—	1½ ,, 2 ft.	2	0		
	—″— —″—	6 ,, 7 ft.	7	6		
8	—″— —″—	7 to 8 ft.	9	0		
	—″— —″—	8 ,, 9 ft.	10	6		
5	—″— —″— Finedonensis, small		2	6		
5	—″— monstrosa	1 to 1½ ft.	1	0		
	—″— —″—	1½ ,, 2 ft.	1	6		
	—″— —″—	2 ,, 2½ ft.	2	6		
	—″— —″—	10 to 12ft., 5/- to	7	6		
5	—″— mucronata	8in.	2	0		
5	—″— pumila	2/6 to	10	6		
5	—″— pygmæa	2/6 ,,	7	6		
6	—″— pyramidalis	1 to 1½ ft.	2	0		
	—″— —″— extra fine specimens	10 to 12ft., 7/6 to	10	6		
6	Hookeriana	3 ft.	10	6		
	Maximowiczii	4 to 6in.	2	6		
	Maxwellii (new), small		10	6		
6	Menziesii	15 to 18 in.	1	6		
	—″— larger	6 to 7ft., 2/6 to	5	0		
6	Mertensiana	1 to 1½ ft.	1	0		
	—″—	1½ ,, 2 ft.	1	6		
	—″—	10 ,, 12 ft.	12	6		
	—″—	12 ,, 15 ft.	15	0		
6	morinda	15 in.	1	0		
	—″—	15 to 18 in.	1	6		
	—″— variegata	9 ,, 12 in.	3	6		
6	nigra	2 ,, 2½ ft.	1	0	10	0
	—″—	2½ ,, 3 ft.	1	6	15	0
	—″—	3 ,, 3½ ft.	2	0	18	0
	—″—	3½ ,, 4 ft.	2	6	24	0
	—″— Doumettii	6 ,, 9 in.	2	6		
6	obovata	1½ ,, 2 ft.	2	6		
	—″—	2 ,, 2½ ft.	3	0		
7	orientalis	9 ,, 12 in.	0	9		
	—″—	12 ,, 15 in.	1	0		
	—″—	5 ,, 6 ft.	6	0		
	—″—	6 ,, 7 ft.	7	0		

		Each.		Doz.	
		s.	*d.*	*s.*	*d.*
	ABIES—				
	orientalis ....7 to 8 ft.	8	0		
	—"— ....8 ,,10 ft.	10	6		
	pygmæa glauca ....7 ,, 8 in.	2	6		
	Sitchensis ....9 ,,12 in.	1	0		
	—"— ....12 ,,15 in.	2	0		
	ARAUCARIA—				
7	imbricata ....15 ,,18 in.	3	0		
	—"— ....18 ,,21 in.	4	0		
	—"— ....21 ,,24 in.	5	0		
	—"— fine specimens ..63/- to	105	0		
	BIOTA—				
	Ascotensis, fine ....9 ,,12 in.	2	6		
	—"— ....12 ,,15 in.	3	0		
	falcata ....6 ,, 9 in.	1	0		
	—"— ....9 ,,12 in.	1	6		
	—"— ....12 ,,15 in.	2	0		
	—"— ....15 ,,18 in.	2	6		
	—"— ....18 ,,24 in.	3	0		
	—"— ....2 ,, 2½ft.	3	6		
	—"— nana ....6 ,, 9 in.	1	6		
	—"— —"— ....9 ,,12 in.	2	0		
8	filiformis ....9 ,,12 in.	1	6		
	—"— ....12 ,,15 in.	2	0		
	—"— ....15 ,,18 in.	2	6		
	—"— .... 1½,, 2 ft.	3	0		
	—"— fine specimens....5/- to	15	0		
8	—"— intermedia ..9 to12 in.	2	0		
	—"— ....12 ,,15 in.	2	6		
8	funiculata..........9 ,,12 in.	1	6		
	—"— ....12 ,,15 in.	2	0		
	—"— ....15 ,,18 in.	2	6		
	—"— ....1½,, 2 ft.	3	0		
9	glauca ....6 ,, 9 in.	1	0		
9	gracilis, *syn.* freneloides, 1 to 1½ft.	0	9		
	—"—..............1½,, 2 ft.	1	0		
	—"—..............3 ,, 4 ft.	2	0		
	—"—..............4 ,, 5 ft.	2	6		
	—"—..............5 ,, 6 ft.	3	6		
	—"—..............6 ,, 7 ft.	4	0		
	—"—..............7 ,, 8 ft.	5	0		
	macrocarpa ....1 ,, 1½ft.	2	0		
	—"—..............1½,, 2 ft.	2	6		
9	meldensis ....15 ,, 18 in.	2	0		
9	orientalis ....1½,, 2 ft.	0	9		
	—"— ....2 ,, 2½ft.	1	0		
	—"— ....2½,, 3 ft.	1	6		
	—"— ....3 ,, 3½ft.	2	0		
	—"— ....3½,, 4 ft.	2	6		
	—"— ....4 ,, 5 ft.	3	6		
	—"— ....5 ,, 6 ft.	5	0		
	—"— fine specimens....7/6 to	10	6		
9	—"— arthrotaxoides, 6 to 9 in.	2	0		
	—"— —"— ....9 ,,12 in.	2	6		
9	—"— aurea ......12 ,,15 in.	1	6		
	—"— —"— ......15 ,,18 in.	2	6		
	—"— —"— ......21 ,,24 in.	5	0		
	—"— —"— ......2 ,, 2½ft.	7	6		
	—"— —"— splendid specimens 10/6 to	31	6		
9	—"— compacta ....1 to 1½ft.	1	0		
	—"— —"— ....1½,, 2 ft.	1	6		
	—"— —"— ....4 ,, 5 ft.	5	0		
	—"— —"— ....5 ,, 6 ft.	6	0		
	BIOTA—				
	orientalis compacta, very fine specimens............7/6 to	15	0		
9	—"— elegantissima, 6 to 9 in.	1	3	12	0
	—"— —"— ....9 ,,12 in.	1	6	15	0
	—"— —"— ......12 ,,15 in.	2	0	18	0
	—"— —"— ......15 ,,18 in.	3	0		
	—"— —"— ......18 ,,21 in.	4	0		
	—"— —"— larger......5/- to	10	6		
9	—"— incurvata ....6 to 7 ft.	3	0		
8	—"— japonica ....12 ,,15 in.	1	6		
	—"— —"— ......15 ,,18 in.	2	0		
	—"— —"— ......18 ,,24 in.	2	6		
	—"— —"— ....2 ,, 2½ft.	3	6		
	—"— —"— ....2½,, 3 ft.	5	0		
	—"— —"— ....4 ,, 4½ft.	10	6		
	—"— —"— ....4½,, 5 ft.	12	6		
	—"— —"— fine specimens, 6 to 8ft. ....15/- to	31	6		
10	—"— pyramidalis, *syn.* tartarica 1/6 to	3	6		
10	—"— semper-aurescens, 6 to 9 in.	1	6		
	—"— —"— ....9 ,, 12 in.	2	6		
10	—"— variegata argentea, 9 to12 in.	1	6		
	—"— —"— ...... 12 ,,15 in.	2	0		
	—"— —"— ...... 15 ,,18 in.	2	6		
10	—"— —"— aurea.. 9 ,,12 in.	2	0		
	—"— —"— —"—..12 ,,15 in.	2	6		
	—"— —"— —"—..15 ,,18 in.	3	0		
	CALLITRIS—				
10	quadrivalvis ...... 9 ,,12 in.	2	6		
	CEDRUS—				
11	argentea .... 6 ,, 7 ft.	10	6		
	—"— .... 7 ,, 8 ft.	12	6		
	—"— .... 8 ,,10 ft.	15	0		
	—"— ....10 ,,12 ft.	21	0		
	—"— ....12 ,,15 ft.	25	0		
11	deodara............ 1 ,, 1½ft.	1	6		
	—"— .... 1½,, 2 ft.	2	0		
	—"— .... 2 ,, 2½ft.	2	6		
	—"— .... 2½,, 3 ft.	3	0		
	—"— .... 3 ,, 3½ft.	4	0		
	—"— .... 3½,, 4 ft.	5	0		
	—"— .... 4 ,, 5 ft.	7	6		
	—"— extra fine specimens, 31/6 to	105/			
	—"— albo spica ..12 to15 in.	5	0		
	—"— ....15 ,,18 in.	7	6		
11	—"— crassifolia	2	6		
11	—"— robusta...... 9 ,,12 in.	2	0		
	—"— —"— ......12 ,,15 in.	3	0		
	—"— —"— ......15 ,,18 in.	4	0		
11	—"— viridis ...... 6 ,, 9 in.	1	6		
11	—"— verticillata glauca, 4 ,, 6 in.	2	6		
11	libani, large specimens..21/-to	31	6		
	CEPHALOTAXUS—				
12	drupacea .... 9 to12 in.	1	0		
	—"— ....12 ,,15 in.	1	6		
	—"— ....15 ,,18 in.	2	0		
	—"— ....18 ,,21 in.	3	6		
	—"— ....21 ,,24 in.	5	0		
	—"— .... 2 ,, 2½ft.	7	6		
	—"— ....2½,, 3 ft.	10	6		
	—"— extra fine specimens, 15/to	21	0		

NOTE.—The figures in the first column denote the page in the Descriptive List of the Fir Tribe.

			Each		Doz.	
			s.	d.	s.	d.
	CEPHALOTAXUS—					
12	Fortunei	2/6 to	5	0		
12	—″— robusta	6 to 9 in.	3	6		
	—″— —″—	9 ,,12 in.	5	0		
12	pedunculata	18 in.	3	6		
	CHAMÆCYPARIS—					
13	glauca	1/6 to	3	6		
12	sphæroidea	2/6 to	3	6		
13	—″— atrovirens	2 to 2½ft.	3	6		
	thujæformis	9 ,,12 in.	1	6		
	—″—	12 ,,18 in.	2	0		
13	thurifera	12 ,,18 in.	2	6		
13	variegata	9 ,,12 in.	2	0		
13	—″— larger	2/6 to	3	6		
	CRYPTOMERIA—					
13	elegans	9 to12 in.	0	9		
	—″—	12 ,,15 in.	1	3	12	0
	—″—	15 ,,18 in.	1	6	15	0
	—″—	1½,, 2 ft.	2	0	18	0
	—″—	2 ,, 2½ft.	3	6		
13	japonica araucarioides	9 ,,12 in.	2	0		
	—″— spiralis falcata,	6 ,, 8 in.	5	0		
13	Lobbii		1	6		
14	—″— viridis		1	6		
	—″— —″— larger		5/	7/6		
	pungens	4 to 6 in.	2	6		
	CUPRESSUS—					
14	Bregeoni	9 to12 in.	1	6		
14	Californica, *syn.* C. Lawsoni fragrans	1½to 2 ft.	0	6	5	0
	—″—	2 ,, 2½ft.	0	9	8	0
	—″—	2½,, 3 ft.	1	0	10	0
	—″—	3 ,, 3½ft.	1	3	12	0
	—″—	3½,, 4 ft.	1	6	15	0
	—″— larger	5s. to	7	6		
14	Corneyana	9 ,,12 in.	1	6		
	—″—	12 ,,15 in.	2	0		
	—″—	15 ,,18 in.	2	6		
	—″—	1½,, 2 ft.	3	0		
14	elegans	9 ,,12 in.	0	9		
	—″—	1½,, 2 ft.	1	6		
15	funebris	12 ,,15 in.	1	0	9	0
	—″—	15 ,,18 in.	1	3	12	0
	—″—	1½,, 2 ft.	1	6	15	0
15	glandulosa	3 ,, 3½ft.	2	0		
	—″—	3½,, 4 ft.	2	6		
	—″—	4 ,, 5 ft.	3	0		
15	Goveniana	12 ,,18 in.	1	0		
	—″—	1½,, 2 ft.	1	6		
	—″— glaucescens,new	12 ,,15 in.	3	6		
	Lambertiana	12 ,,15 in.	1	3	12	0
	—″—	15 ,,18 in.	1	6	15	0
	—″—	1½,, 2 ft.	2	0	18	0
	—″—	2 ,, 2½ft.	..		21	0
15	Lawsoniana	1 ,, 1½ft.	0	4	3	0
	—″—	1½,, 2 ft.	0	6	5	0
	—″—	2 ,, 2½ft.	0	9	8	0
	—″—	2½,, 3 ft.	1	0	10	0
	—″—	3 ,, 3½ft.	1	3	12	0
	—″—	3½,, 4 ft.	1	6	15	0
	—″—	4 ,, 5 ft.	2	0		
	—″— larger	5/- to	10	6		
	—″— albo spica	9 to12 in.	2	6		
	—″— —″—	12 ,,15 in.	3	6		
15	—″— argentea	15 ,,18 in.	1	6		
	—″— —″—	1½,, 2 ft.	2	0		

			Each		Doz.	
			s.	d.	s.	d.
	CUPRESSUS—					
	Lawsoniana argentea,	2 to 2½ft.	2	6		
	—″— densa, small		2	6		
15	—″— erecta viridis	9 ,,12 in.	1	0		
	—″— —″— —″—	12 ,,15 in.	1	6		
	—″— —″— —″—	15 ,,18 in.	2	0		
	—″— —″— —″—	1½,, 2 ft.	3	0		
	—″— —″— —″—	2 ,, 2½ft.	3/6	5/		
	—″— glauca	1 ,, 1½ft.	2	0		
	—″— —″—	1½,, 2 ft.	2	6		
	—″— —″—	2 ,, 2½ft	3	0		
15	—″— gracilis	12 ,,15 in.	1	6		
	—″— —″—	15 ,,18 in.	2	0		
	—″—	1½,, 2 ft.	2	6		
	—″— lutea (fine)	4 to 6 in.	3	6		
15	—″— minima, *syn.* pygmea,	6in.	1	0		
15	—″— pendula alba,	9 to12 in.	2	6		
	—″— —″—	12 ,,15 in.	3	6		
16	lusitanica		1	0		
16	—″— Benthamii	12 to15 in.	1	6		
	—″— —″—	15 ,,18 in.	2	0		
16	Mac Nabiana	12 ,,15 in.	1	0		
	—″—	3 ,, 3½ft.	2	6		
16	macrocarpa	12 ,,18 in.	0	9		
	—″—	3 ,, 4 ft.	2	6		
	—″—	4 ,, 5 ft.	3	6		
16	—″— variegata	9 ,,12 in.	3	6		
17	majestica	9 ,,12 in.	1	0		
	—″—	12 ,,15 in.	1	6		
	—″—	15 ,,18 in.	2	0		
	—″— retrofracta	12 in.	1	0		
16	sempervirens	6d. to	1	0		
	—″— monstrosa, *syn.* Cupressus thujæformis,	9 to12 in.	1	0		
	—″— —″—	2 ft.	1	6		
17	torulosa	1 to 1½ft.	1	6		
	—″—	1½,, 2 ft.	2	0		
	—″— viridis	9 ,,12 in.	1	0		
	—″— —″—	1 ,, 1½ft.	1	6		
	—″— —″—	1½,, 2 ft.	2	0		
17	Whitleyana	12 ,,15 in.	1	0		
	—″—	1½,, 2 ft.	1	6		
	—″—	2 ,, 2½ft.	2	0		
	GLYPTOSTROBUS—					
43	sinensis pendula	9 ,,12 in.	1	0		
	—″— —″—	12 ,,15 in.	1	6		
	—″— —″—	15 ,,18 in.	2	0		
	—″— —″—	18 ,,21 in.	2	6		
	JUNIPERUS—					
	bacciformis	9 ,,12 in.	1	0		
	—″—	12 ,,15 in.	1	6		
	—″—	15 ,,18 in.	2	0		
	—″—	18 ,,24 in.	2	6		
22	Bedfordiana	1 ,, 1½ft.	1	6		
	—″—	1½,, 2 ft.	2	0		
18	chinensis	1 ,, 1½ft.	0	9	8	0
	—″—	1½,, 2 ft.	1	0	10	0
	—″—	2 ,, 2½ft.	1	6	15	0
	—″—	2½,, 3 ft.	2	0	21	0
	—″—	3 ,, 3½ft.	2	6	24	0
	—″—	3½,, 4 ft.	3	6	36	0
	—″—	4 ,, 5 ft.	4	0	42	0
	—″—	5 ,, 6 ft.	5	0		
	—″—	6 ,, 7 ft.	7	6		
	—″—	7 ,, 8 ft.	10	6		
	—″— beautiful specimens,	15/-	42	0		

NOTE.—The figures in the first column denote the page in the Descriptive List of the Fir Tribe.

		Each. s.	Each. d.	Doz. s.	Doz. d.
	JUNIPERUS—				
18	chinensis fœmina ..1 to 1½ft.	1	0		
	—"— —"— ....1½,, 2 ft.	1	6		
18	—"— argentea variegata, 9 ,,12 in.	1	6		
	—"— —"— —"—..12 ,,15 in.	2	0		
	—"— —"— —"—..15 ,,18 in.	2	6		
	—"— aurea (new), 4 ,, 6 in.	5	0		
	—"— —"— ....6 ,, 9 in.	7	6		
	—"— —"— ....9 ,,12 in.	10	6		
	—"— —"— ......12 ,,15 in.	15	0		
19	communis .... 1 ,, 1½ft.	0	4		
	—"— .... 1½,, 2 ft.	0	6		
	—"— .... 2 ,, 2½ft.	0	9		
	—"— .... 2½,, 3 ft.	1	0		
	—"— .... 3 ,, 3½ft.	1	6		
18	densata .... 1½,, 2 ft.	1	3		
	—"— .... 2 ,, 2½ft.	1	6		
	—"— .... 5 ,, 6 ft.	5	0		
	—"— .... 6 ,, 7 ft.	6	0		
	—"— larger ....7/6 to	10	6		
	dealbata .... 6 ,, 9 in.	1	6		
19	drupacea .... 6 ,, 9 in.	1	6		
	—"— .... 9 ,,12 in.	2	0		
	—"— ....12 ,,15 in.	2	6		
19	excelsa .... 9 ,,12 in.	1	6	15	0
	—"— ....12 ,,15 in.	2	0	21	0
	—"— ....15 ,,18 in.	2	6	24	0
	—"— ....18 ,,21 in.	3	0		
	—"— large specimens, 10/6 to	21	0		
19	—"— stricta ...... 6 to 9 in.	1	6		
	—"— —"— ...... 9 ,,12 in.	2	0		
	—"— —"— ......12 ,,15 in.	2	6		
	Fortunei ....12 ,,15 in.	2	0		
	—"— ....15 ,,18 in.	2	6		
19	hibernica ....1½,, 2 ft.	1	0		
	—"— ....2 ,, 2½ft.	1	6		
	—"— ....3 ,, 4 ft.	2	6		
19	—"— compressa ....6 ,, 9 in.	2	0		
	—"— —"— ....9 ,,12 in.	2	6		
	—"— —"— ......12 ,,15 in.	3	6		
20	interrupta ....9 ,,12 in.	1	0		
	japonica aurea, small	2	6		
20	—"— —"— variegata, small..	2	6		
21	Langoldiana, *syn.* Lycia, 9 to12 in.	2	0		
	—"— ....12 ,,15 in.	2	6		
19	Leeana ....6 ,, 7 ft.	3	6		
20	Marshalli .... 6 ,, 9 in.	1	6		
20	nana..............12 ,,15 in.	1	6		
	—"— ....15 ,,18 in.	2	0		
20	nana canadensis .. 1 ,, 1½ft.	2	0		
20	oblonga pendula .. 9 ,,12 in.	1	6		
	—"— —"— ......12 ,,15 in.	2	0		
	—"— —"— ......15 ,,18 in.	2	6		
20	occidentalis, *syn.* fragrans, 1 to 1½ft.	1	6		
	—"— —"— ...... 1½,, 2 ft.	2	0		
	—"— —"— ...... 2 ,, 2½ft.	2	6		
	—"— —"— ...... 3 ,, 4 ft.	3	0		
	—"— —"— ...... 4 ,, 5 ft.	4	0		
	—"— —"— ...... 5 ,, 6 ft.	5	0		
20	oxycedrus rufescens, 6 ,, 9 in.	1	6		
20	—"— echiniformis	2	6		
21	phœnicea .... 1½to 2 ft.	1	6		
	—"— .... 2 ,, 2½ft	2	0		
	—"— .... 2½,, 3 ft.	2	6		

		Each. s.	Each. d.	Doz. s.	Doz. d.
	JUNIPERUS—				
	phœnicea, larger 5/-to	10	6		
21	prostrata.......... 1½to 2 ft.	1	6		
	pseudo sabina .... 2 ,, 2½ft.	2	6		
21	recurva ....12 ,,15 in.	1	6		
	—"— ....15 ,,18 in.	2	0		
	—"— .... 1½,, 2 ft.	2	6		
21	—"— densa ...... 9 ,,12 in.	1	6		
	—"— ....12 ,,15 in.	2	0		
	—"— ....15 ,,18 in.	2	6		
21	religiosa .... 9 ,,12 in.	2	0		
	—"— ....12 ,,15 in.	2	6		
21	rigida .... 6 ,, 9 in.	2	0		
21	sabina .... 1 ,, 1½ft.	0	6		
	—"— .... 1½,, 2 ft.	0	9	6	0
	—"— .... 2 ,, 2½ft.	1	0	9	0
21	—"— variegata ....1/- to	2	6		
21	sabinoides, *syn.* tamariscifolia, 9d. to	1	6		
20	Scholli............ 9 to12 in.	1	0		
23	Schottii .... 9 ,,12 in.	0	9		
	—"— .... 1 ,, 1½ft.	1	0		
	—"— .... 1½,, 2 ft.	1	6		
22	sphærica.......... 1 ,, 1½ft.	1	3		
	—"— .... 1½,, 2 ft.	1	6		
	—"— fine specimens....5/- to	15	0		
22	squamata .... 1 to 1½ft.	1	0		
	—"— .... 1½,, 2 ft.	1	6		
	—"— larger ....3/6 to	5	0		
19	suecica ....2 ,, 2½ft.	1	6		
	—"— ....2½,, 3 ft.	2	0		
	—"— ....3 ,, 3½ft.	2	6		
22	thurifera.......... 9 ,,12 in.	0	9		
22	virginiana .... 1½,, 2 ft.	0	6		
	—"— .... 2 ,, 2½ft.	0	9		
	—"— .... 2½,, 3 ft.	1	0		
	—"— .... 3 ,, 3½ft.	1	6		
	—"— .... 6 ,, 7 ft.	3	6		
22	—"— glauca ...... 1 ,, 1½ft.	1	0		
	—"— —"— ...... 1½,, 2 ft.	1	6		
	—"— —"— ...... 2 ,, 3 ft.	2	0		
23	—"— humilis ......6 ,, 9 in.	1	0		
	—"— —"— ....9 ,,12 in.	1	6		
	—"— —"— ......12 ,,15 in.	2	0		
	—"— —"— ......15 ,,18 in.	2	6		
23	—"— pendula ......1½,, 2 ft.	1	6		
	—"— —"— ....2 ,, 2½ft.	2	0		
23	—"— tripartita ....15 ,,18 in.	2	0		
	—"— —"— ....1½,, 2 ft.	2	6		
23	—"— variegata ....4 ,, 6 in.		6		
22	—"— venusta ......9 ,,12 in.	1	0		
	—"— —"— ......12 ,,15 in.	1	3		
	—"— —"— ......15 ,,18 in.	1	6		
	—"— —"— ....1½,, 2 ft.	2	0		
	—"— —"— ....2 ,, 2½ft.	2	6		
	—"— —"— ....2½,, 3 ft.	3	0		
	—"— —"— ....3 ,, 3½ft.	4	0		
33	—"— viridis pendula1 ,, 1½ft	1	0		
	—"— —"— ....1½,, 2 ft.	1	6		
	—"— —"— ....4 ,, 5 ft.	3	0		
	—"— —"— ....5 ,, 6 ft.	4	0		
	LARIX—				
24	americana ....12 ,,15 in.	0	9		
	—"— .... 2 ,, 3 ft.	1	6		
24	—"— pendula, or microcarpa	1	6		
24	Dahurica, or Siberica	1	6		
24	europæa pendula	1	6		

NOTE.—The figures in the first column denote the page in the Descriptive List of the Fir Tribe.

		Each. s.	Each. d.	Doz. s.	Doz. d.
	LARIX—				
24	leptolepis,or japonica,3 to 4 ft	2	0		
24	Ledebourii ....3 ,, 4 ft	2	0		
24	Rossica ....3 ,, 4 ft.	1	6		
	LIBOCEDRUS—				
25	Chilensis ....9 ,,12 in.	1	6		
	—″— ....12 ,,15 in.	2	0		
25	—″— viridis ......6 ,, 9 in.	1	6		
	—″— —″— ....9 ,,12 in.	2	0		
	—″— —″— ......12 ,,15 in.	2	6		
25	Doniana ....4 ,, 6 in.	2	0		
	PICEA—				
	amabilis ....1½ to 2 ft.	5	0		
	—″— ....2 ,, 2½ft.	7	6		
	—″— ....2½,, 3 ft.	10	6		
26	balsamea ....1½,, 2 ft.	0	4		
	—″— ....2 ,, 3 ft.	0	6		
	—″— ....3 ,, 3½ft.	1	0		
26	—″— variegata	2	6		
26	bracteata ....9 to12 in.	3	6		
	—″— ....12 ,,15 in.	5	0		
	—″— ....15 ,,18 in.	7	6		
26	firma ....9 ,,12 in.	3	6		
	—″— ....12 ,,15 in.	5	0		
27	Fraserii ....1/- to	1	6		
27	grandis ....12 to15ft.	52	6		
27	Hudsonica..................	2	6		
27	lasiocarpa ....6 to 9 in.	2	6		
	—″— ....9 ,,12 in.	3	6		
	—″— ....4½,, 5 ft.	42	0		
	—″— ....5 ,, 6 ft.	52	6		
	—″— extra specimens........	63	0		
27	magnifica ....9 to12 in.	5	0		
	—″— ....12 ,,15 in.	7	6		
	—″— ....15 ,,18 in.	10	6		
	—″— ....18 ,,21 in.	12	6		
	—″— ....21 ,,24 in.	15	0		
	—″— ....3 ,, 3½ft.	42	0		
	—″— ....4 ,, 4½ft.	63	0		
	—″— extra fine specimens, 84/- to	105	0		
27	nobilis (seedling) ....6 to 9 in.	1	6		
	—″— —″— ......12 ,,15 in.	2	6		
	—″— —″— ......15 ,,18 in.	3	6		
	—″— —″— ....4½,, 5 ft.	31	6		
	—″— —″— ....5 ,, 6 ft.	42	0		
27	—″— —″— best glaucous variety ....9 to12 in.	2	6		
	—″— —″— ......12 ,,15 in.	3	0		
	—″— —″— ......15 ,,18 in	4	0		
	—″— —″— ......18 ,,21 in.	5	0		
	—″— —″— ......21 ,,24 in.	6	0		
	—″— —″— ....2 ,, 2½ft.	7	6		
	—″— —″— ....2½,, 3 ft.	10	0		
	—″— —″— ....3 ,, 3½ft.	12	0		
	—″— —″— ....3½,, 4 ft.	15	0		
	—″— —″— ....4 ,, 4½ft.	21	0		
	—″— —″— ....4½,, 5 ft.	31	6		
	—″— —″— larger specimens, 42/- to	63	0		
28	Nordmanniana ....12 to15 in.	0	8		
	—″— ....15 ,,18 in.	1	0		
	—″— ....1½,, 2 ft.	1	6		
	—″— ....2 ,, 2½ft.	2	6		
	—″— ....2½,, 3 ft.	5	0		
	—″— ....3 ,, 4 ft.	7	6		
	—″— ....4 ,, 5 ft.	10	6		

		Each. s.	Each. d.	Doz. s.	Doz. d.
	PICEA—				
	Nordmanniana ......5 to 6 ft.	15	0		
28	numidica ....6 ,, 9 in.	3	6		
	—″— ....9 ,,12 in.	5	0		
28	pectinata pendula ..12 ,,18 in.	3	0		
28	pichta ....2/6 to	3	6		
28	pinsapo ....15 to18 in.	2	6		
	—″— ....18 ,,21 in.	3	0		
	—″— ....21 ,,24 in.	3	6		
	—″— ....2 ,, 2½ft.	4	0		
	—″— ....2½,, 3 ft.	5	0		
	—″— ....3 ,, 3½ft	7	6		
	—″— ....3½,, 4 ft.	10	0		
	—″— ....4 ,, 5 ft.	15	0		
	—″— ....5 ,, 6 ft.	21	0		
	—″— ....7 ,, 8 ft.	31	6		
	—″— extra fine....42/-63/- to	105	0		
	—″— glauca........9 to12 in.	2	6		
	—″— —″— ......12 ,,15 in.	3	6		
	PINUS—				
35	aristata ....6 to 9 in.	2	0		
	—″— ....9 ,,12 in.	3	0		
29	austriaca ....1 ,, 1½ft.	0	4	3	0
	—″— ....1½,, 2 ft.	0	6	5	0
	—″— ....2 ,, 2½ft.	0	9	8	0
	—″— ....2½,, 3 ft.	1	0	10	0
	—″— ....3 ,, 4 ft.	1	6		
	—″— ....4 ,, 5 ft.	2	0		
30	—″— variegata ....3/6 to	5	0		
	Bermuja................6 in.	2	6		
33	Benthamiana ......1 to 1½ft.	2	0		
	—″— ....1½,, 2 ft.	2	6		
	—″— larger ....5/- to	10	6		
	—″— brevifolia, or strobus alba..............6 to 9 in.	3	0		
	—″— ....9 ,,12 in.	3	6		
33	Bungeana ....6 ,, 9 in.	2	6		
	—″— ....9 ,,12 in	3	6		
	—″— ....12 ,,15 in.	5	0		
35	cembra ....1 ,, 1½ft.	0	9		
	—″— ....1½,, 2 ft.	1	0		
	—″— ....2 ,, 2½ft.	1	6		
	—″— ....2½,, 3 ft	2	0		
	—″— ....4 ,, 5 ft.	3	6		
	—″— ....5 ,, 6 ft.	5	0		
	—″— fine specimens ....7/6 to	10	6		
35	—″— manchurica ..4 to 6 in.	2	0		
	—″— —″— ....6 ,, 9 in.	3	0		
	—″— pumila ......6 ,, 9 in.	5	0		
	—″— variegata ....4 ,, 6 in.	3	6		
	—″— —″— ....6 ,, 9 in.	5	0		
30	densiflora ....6 ,, 9 in.	1	0		
	—″— ....9 ,,12 in.	1	6		
	—″— ....12 ,,15 in	2	0		
	—″— ....15 ,,18 in.	2	6		
	—″— ....1½,, 2 ft.	3	0		
	—″— ....3 ,, 3½ft.	5	0		
36	excelsa ....12 ,,18 in.	1	0		
	—″— ....1½,, 2 ft.	1	6		
	—″— ....2 ,, 2½ft.	2	0		
	—″— ....3½,, 4 ft.	3	6		
	—″— ....5 ,, 6 ft.	5	0		
	—″— larger ....10/6 to	31	6		
	—″— nana ....4 to 6 in.	2	0		
	—″— —″— ....9 ,,12 in.	3	6		
36	—″— rigida ....6 ,, 9 in.	5	0		
36	flexilis ....4 ,, 6 in.	2	0		

NOTE.—The figures in the first column denote the page in the Descriptive List of the Fir Tribe.

			Each		Doz.	
			s.	d.	s.	d.
	PINUS—					
	flexilis	6 to 9 in.	2	6		
	—″—	9 ,,12 in	3	6		
	—″—	12 ,,15 in.	5	0		
33	Fremontiana	6 ,, 9 in.	2	6		
	—″—	9 ,,12 in.	3	6		
33	Gerardiana	6 ,, 9 in.	2	0		
	—″—	9 ,,12 in.	2	6		
36	Hartwegii	12 ,,15 in.	7	6		
30	inops	1½ ,, 2 ft	2	0		
	—″—	2 ,, 2½ ft.	2	6		
33	insignis	9 ,,12 in	0	9		
	—″—	12 ,,15 in	1	0		
	—″—	15 ,,18 in.	1	6		
	—″—	1½ ,, 2 ft.	2	0		
	—″—	5 ,, 6 ft.	5	0		
	—″—	6 ,, 7 ft.	6	0		
	—″—	7 ,, 8 ft.	7	6		
34	Jeffreyi	6 ,, 9 in.	1	6		
	—″—	9 ,,12 in.	2	0		
	—″—	12 ,,15 in.	2	6		
	—″—	15 ,,18 in.	3	0		
	—″—	1½ ,, 2 ft.	3	6		
	—″—	2 ,, 2½ ft.	5	0		
36	koraiensis	6 ,, 9 in.	3	0		
30	laricio	1 ,, 1½ ft.	0	6	5	0
	—″—	1½ ,, 2 ft.	0	8		
	—″—	2 ,, 2½ ft.	0	9		
30	—″— calabrica	12 ,,15 in.	1	6		
30	—″— caramanica	9 ,,12 in.	1	6		
	—″— —″—	12 ,,15 in.	2	0		
	—″— —″—	5 ,, 6 ft.	7	6		
31	—″— contorta	6 ,, 9 in.	1	6		
	—″— —″—	9 ,,12 in.	2	0		
31	—″— pygmæa	6 in.	2	6		
36	Lambertiana	6 ,, 9 in.	1	6		
	—″—	9 ,,12 in.	2	0		
	—″—	12 ,,15 in.	2	6		
	—″—	15 ,,18 in.	3	0		
	—″—	1½ ,, 2 ft.	3	6		
	—″— extra strong specimens,	15/- to	31	6		
	Lindleyana	3/6 to	5	0		
	leiophylla	6 in.	2	6		
36	Loudoniana	6 to 9 in.	2	6		
	—″—	9 ,,12 in.	3	6		
34	Llaveana, small		1	6		
34	macrocarpa	6 to 9 in.	2	0		
31	Massoniana	6 ,, 9 in.	1	6		
	—″—	1½ ,, 2 ft.	2	6		
	—″—	2 ,, 2½ ft.	3	6		
31	mitis	6 ,, 9 in.	1	0		
37	Montezumæ	3/6 to	5	0		
37	monticola	6 to 9 in.	2	0		
	—″—	9 ,,12 in.	2	6		
	—″—	1 ,, 1½ ft.	3	6		
	—″—	1½ ,, 2 ft.	5	0		
32	mugho *syn.* uncinata	12 ,,15 in.	0	6	5	0
	—″—	15 ,,18 in.	0	9	8	0
31	muricata, *syn* Murrayana,	9 to 12 in.	1	6		
	—″—	12 ,,15 in.	2	0		
	—″—	15 ,,18 in.	2	6		
	—″—	1½ ,, 2 ft.	3	0		
	—″—	2 ,, 2½ ft.	4	0		
	—″—	4 ft.	7	6		
	Padufiana	12 ,,18 in.	3	0		

			Each		Doz.	
			s.	d.	s.	d.
	PINUS—					
31	Pallasiana	1 to 1½ ft.	0	9		
	—″—	1½ ,, 2 ft.	1	0		
	Parryana	6 ,, 9 in.	3	6		
37	parviflora	6 ,, 9 in.	3	0		
	—″—	9 ,,12 in.	3	6		
37	peuce	9 ,,12 in.	1	6		
	—″—	12 ,,15 in.	2	6		
	—″—	15 ,,18 in.	3	6		
31	pinaster	2 ,, 3 ft.	1	6		
	—″— minor	12 ,,15 in.	2	0		
31	pinea	9 ,,12 in.	0	9		
	—″—	1 ,, 1½ ft.	1	0		
	—″—	2 ,, 2½ ft.	2	6		
32	pumilio		0	6		
	pyrenaica	12 ,,18 in.	1	0		
	—″—	1½ ,, 2 ft.	1	6		
	—″—	2 ,, 2½ ft.	2	0		
	—″—	7 ,, 8 ft.	10	6		
34	radiata	9 ,,12 in.	1	6		
	—″—	12 ,,15 in.	2	0		
34	rigida	6 ,, 9 in.	0	9		
	—″—	9 ,,12 in.	1	0		
	—″—	12 ,,15 in.	1	6		
	—″—	15 ,,18 in.	2	0		
	—″— larger		7	6		
34	sabiniana	6 to 9 in.	1	0		
	—″—	9 ,,12 in.	1	6		
	—″—	12 ,,15 in.	2	0		
	—″—	15 ,,18 in.	2	6		
	—″—	1½ ,, 2 ft.	3	6		
	—″— larger	5/-	7	6		
37	strobus	2 to 2½ ft.	0	4		
	—″—	2½ ,, 3 ft.	0	6		
	—″—	3 ,, 4 ft.	1	0		
	—″—	4 ,, 5 ft.	1	6		
37	—″— nana (or umbraculifera),	6 to 9in.	2	6		
37	—″— nivea	6 to 9 in.	2	0		
32	sylvestris	1½ ,, 2 ft.	0	3	2	0
	—″— —″—	3 ,, 4 ft.	0	9		
32	—″— globosa	6 ,, 9 in.	3	0		
	—″— —″—	9 ,,12 in.	4	0		
	—″— variegata	2/6 to	3	6		
32	tabulæformis	6 to 9 in.	1	6		
	—″—	9 ,,12 in.	2	0		
	—″—	7 ,, 8 ft.	10	6		
37	Torreyana	6 ,, 9 in.	2	6		
34	tuberculata	9 ,,12 in.	1	0		
	PODOCARPUS—					
38	andina	6 to 9 in.	1	0		
	—″—	9 ,,12 in.	1	6		
	—″—	12 ,,18 in.	2	0		
38	japonica	9 ,,12 in.	0	9	6	0
	—″—	12 ,,15 in.	1	0	9	0
	—″—	15 ,,18 in.	1	6		
	—″—	1½ ,, 2 ft.	2	0		
38	—″— variegata	2/6 to	3	6		
38	macrophylla	6 ,, 9 in.	2	6		
38	—″— variegata	2/6 to	7	6		
	PRUMNOPITYS—					
38	elegans	6 to 9 in.	0	9	6	0
	—″—	9 ,,12 in.	1	0	9	0
	—″—	12 ,,15 in.	1	6		
	—″—	15 ,,18 in.	2	0		
	RETINOSPORA—					
39	ericoides	9 to 12 in.	0	9	8	0

NOTE.—The figures in the first column denote the page in the Descriptive List of the Fir Tribe.

		Each.		Doz.	
		s.	*d.*	*s.*	*d.*
	RETINOSPORA—				
	ericoides ....1½ to 2 ft.	1	6	15	0
	—″— ....2 ,, 2½ ft.	2	6		
39	filicoides ....6 ,, 9 in.	3	6		
39	filifera ....9 ,,12 in.	2	6		
	—″— ....12 ,,15 in.	3	0		
39	leptoclada ....4 ,, 6 in.	1	0		
	—″— ....15 ,,18 in.	3	0		
	—″— ....1½,, 2 ft.	5	0		
39	lycopodioides ......4 ,, 6 in.	2	6		
	—″—..............6 ,, 9 in.	3	6		
39	obtusa ....9 ,,12 in.	1	0		
	—″— ....12 ,,15 in.	1	3		
	—″— ....15 ,,18 in.	1	6		
40	—″— aurea ....4 ,, 6 in.	3	6		
39	—″— argentea variegata,				
	—″—..............4 ,, 6 in.	2	6		
	—″—..............6 ,, 9 in.	3	6		
	—″— Keteleeri ....4 ,, 6 in.	5	0		
40	—″— nana aurea, small, 3/6 to	5	0		
40	—″— —″— gracilis..........	3	6		
40	pisifera ....9 to 12 in.	0	8	6	0
	—″— ....12 ,,15 in.	0	9	8	0
	—″— ....15 ,,18 in.	1	0	10	0
	—″— ....1½,, 2 ft.	1	3	12	0
	—″— ....2 ,, 2½ ft.	1	6	15	0
	—″— ....2½,, 3 ft.	2	0	21	0
	—″— ....3 ,, 4 ft.	3	0		
	—″— ....4 ,, 5 ft.	3	6		
	—″— ....5 ,, 6 ft.				
	5/- to	7	6		
40	—″— argentea ......6 to 9 in.	2	0		
	—″— ....9 ,,12 in.	3	6		
40	—″— aurea ....6 ,, 9 in.	1	6		
	—″— ....9 ,,12 in.	2	0		
	—″— ....12 ,,15 in.	2	6		
	—″— ....1½ ,, 2 ft.	5	0		
40	plumosa ....6 ,, 9 in.	1	0		
	—″— ....9 ,,12 in.	1	6		
	—″— aurea ....6 ,, 9 in.	1	0		
	—″— —″— ....9 ,,12 in.	1	6		
	—″— —″— ....1½,, 2 ft.	5	0		
	—″— flavescens ....6 ,, 9 in.	3	6		
	—″— —″— ....9 ,,12 in.	5	0		
40	squarrosa ....1/- to	2	6		
	stricta..............6 to 9 in.	2	0		
	—″— ....9 ,,12 in.	2	6		
	SAXE-GOTHÆA—				
41	conspicua ....12 ,,15 in.	1	6		
	SCIADOPTYS—				
41	verticillata ....5/- to	10	6		
	SEQUOIA—				
42	sempervirens ......1 to 1½ ft.	0	9		
	—″— ....1½,, 2 ft.	1	0		
	—″— ....5 ,, 6 ft.	5	0		
	—″— ....6 ,, 7 ft.	7	6		
	—″— extra fine specimens,				
	10/6 to	21	0		
	—″— ferruginea (new),				
	9 to 12 in.	3	6		
	—″— —″— ......15 ,,18 in.	5	0		
42	—″— glauca ......12 ,,15 in.	3	6		
	TAXODIUM—				
42	distichum ....2 to 3 ft.	1	6		
	—″—..............3 ,, 4 ft.	2	0		
	—″—..............4 ,, 5 ft.	2	6		
43	mexicanum........12 ,,15 in.	1	6		

		Each.		Doz.	
		s.	*d.*	*s.*	*d.*
	TAXODIUM—				
	mexicanum........15 to 18 in.	2	0		
	—″—..............2 ,, 2½ ft.	3	6		
	TAXUS—				
42	adpressa.............1½,, 2 ft.	2	0		
	—″— ....2 ,, 2½ ft.	2	6		
	—″— ....2½,, 3 ft.	3	0		
	—″— fine specimens ....5/- to	12	6		
43	—″— stricta........9 to 12 in.	1	0		
	—″— —″— ......12 ,,15 in.	1	6		
	—″— —″— ......15 ,,18 in.	2	0		
	—″— —″— ....1½,, 2 ft.	3	0		
	—″— —″— ....2 ,, 2½ ft.	4	0		
	—″— —″— ....2½,, 3 ft.	5	0		
44	baccata ....9 to 12 in. 25/- 100	..		4	0
	—″— ......1 ,, 1½ ft. 35/- ,,	0	6	5	0
	—″— ......1½,, 2 ft.	0	10	8	0
	—″— ......2 ,, 2½ ft. 75/- ,,	1	0	9	0
	—″— ......2½,, 3 ft. 100/-,,	1	6	15	0
	—″— ......3 ,, 3½ ft.........	2	0	21	0
	—″— ......3½,, 4 ft.........	2	6		
	—″— ......5 ,, 6 ft. ..5/- to	7	6		
	—″— ......6 ,, 7 ft. ..7/6 to	10	6		
	—″— larger ....15/- to	42	0		
44	—″— Cheshuntensis, 9 to 12 in.	1	0		
	—″— —″— ....12 ,,15 in.	1	6		
46	—″— cuspidata ....9 ,,12 in.	1	6		
	—″— —″— ....12 ,,15 in.	2	0		
	—″— —″— ......15 ,,18 in.	2	6		
44	—″— Dovastonii ..12 ,,15 in.	1	3		
	—″— —″— ....15 ,,18 in.	1	6		
44	—″— elegantissima, 9 ,,12 in.	1	3	12	0
	—″— —″— ....12 ,,15 in.	1	6	15	0
	—″— —″— ....15 ,,18 in.	2	0	21	0
	—″— —″— ....1½,, 2 ft.	3	0		
	—″— —″— ....2 ,, 2½ ft.	5	0		
	—″— —″— ....2½,, 3 ft.	7	6		
	—″— —″— extra sized speci-				
	mens ....10/6 to	42	0		
44	—″— —″— fœmina, 9 to 12 in.	2	0		
	—″— —″— —″—..12 ,,15 in.	2	6		
	—″— —″— —″—..15 ,,18 in.	3	0		
44	—″— —″— superba, 9 ,,12 in.	2	0		
	—″— —″— —″—..12 ,,15 in.	2	6		
44	—″— epacrioides ....9 ,,12 in.	1	0		
	—″— —″— ......12 ,,15 in.	1	6		
44	—″— erecta ....1 ,, 1½ ft.	1	0	9	0
	—″— —″— ....1½,, 2 ft.	1	3	12	0
	—″— —″— ....2 ,, 2½ ft.	1	6	15	0
	—″— —″— ....2½,, 3 ft.	2	0	18	0
	—″— —″— ....3 ,, 3½ ft.	2	6	24	0
	—″— —″— large specimens,				
	5/- to	10	6		
44	—″— —″— aureis variegatis,				
	syn. pyramidalis variegata,				
	—″— —″— ....9 to 12 in.	1	6		
	—″— —″— ......12 ,,15 in.	2	0		
	—″— —″— ......15 ,,18 in.	2	6		
	—″— —″— ....1½,, 2 ft.	3	6		
	—″— —″— ....2 ,, 2½ ft.	5	0		
46	—″— —″— aurea variegata,				
	(Gold Striped Yew)—				
	9 to 12 in.	1	0	10	0
	—″— —″— ......12 ,,15 in.	1	6	15	0
	—″— —″— ......15 ,,18 in.	1	9	18	0
	—″— —″— ....1½,, 2 ft.	2	6	24	0
	—″— —″— ....2 ,, 2½ ft.	3	6	36	0

NOTE.—The figures in the first column denote the page in the Descriptive List of the Fir Tribe.

		Each s.	Each d.	Doz. s.	Doz. d.
	TAXUS—				
	baccata erecta au. var., 2½ to 3ft.	5/-7/6			
	—〃— —〃— extra sized bushy plants ....10/6 to	42	0		
44	—〃— ericoides ....9 to12 in.	1	0		
	—〃— —〃— ......12 ,,15 in.	1	6		
	—〃— —〃— ......15 ,,18 in.	2	0		
45	—〃— fastigiata ....1 ,, 1½ft.	0	5		
	—〃— —〃— ....1½,, 2 ft.	0	8		
	—〃— —〃— ....2 ,, 2½ft.	0	9		
	—〃— —〃— ....2½,, 3 ft.	1	0		
	—〃— —〃— ....3 ,, 3½ft.	1	6		
	—〃— —〃— ....3½,, 4 ft.	1	9		
	—〃— —〃— ....4 ,, 4½ft.	2	0		
	—〃— —〃— ....4½,, 5 ft.	2	6		
	—〃— —〃— ....5 ,, 6 ft.	3	0		
	—〃— —〃— ....6 ,, 7 ft.	4	0		
	—〃— —〃— ....7 ,, 8 ft.	6	0		
	—〃— —〃— ....8 ,, 9 ft.	7	6		
	—〃— —〃— extra fine specimens ....10/6 to	21	0		
	—〃— —〃— golden - striped, worked on common and Irish Yews, standards, varying in price from ....10/6 to	42	0		
45	—〃— —〃— aurea variegata, 6 to 9 in.	2	0		
	—〃— —〃— —〃— ..9 ,,12 in.	2	6		
45	—〃— partim-aurea..6 ,, 9 in.	2	0		
	—〃— —〃— ....9 ,,12 in.	2	0		
	—〃— —〃— ....1 ,, 1½ft.	3	0		
	—〃— —〃— ....1½,, 2 ft.	3	6		
46	—〃— recurvata ....9 ,,12 in.	1	0		
	—〃— —〃— ....1 ,, 1½ft.	1	6		
46	canadensis ....18 ,,24 in.	2	0		
	—〃—...............2 ,, 2½ft.	2	6		
	—〃— major ....6 ,, 9 in.	1	0		
	—〃— —〃— ....9 ,,12 in.	1	6		
44	erecta *(Crowder's)* ..9 ,,12 in.	0	6		
	—〃— ....12 ,,15 in.	0	9		
	—〃— ....15 ,,18 in.	1	0		
	—〃—...............1½,, 2 ft.	1	6		
	—〃—...............2 ,, 2½ft.	2	0		
	—〃—...............2½,, 3 ft.	2	6		
45	fastigiata argentea variegata 9in	1	6		
45	Fisheri............12 to15 in.	1	0		
	—〃— ....15 ,,18 in.	1	3		
	—〃—...............1½,, 2 ft.	1	6		
45	glauca ....1 ,, 1½ft.	0	9		
	—〃—...............1½,, 2 ft.	1	0		
	—〃—...............2 ,, 2½ft.	1	6		
	—〃—...............2½,, 3 ft.	2	0		
	—〃—...............3 ,, 4 ft.	2	6		
	—〃—...............4 ,, 5 ft.	3	0		
	—〃— larger............5/- to	15	0		
45	horizontalis ....1 to 1½ft.	1	0		
	—〃—...............1½,, 2 ft.	1	6		
	—〃—...............2 ,, 2½ft.	2	0		
	—〃—...............2½,, 3 ft.	2	6		
	imperialis ....12 ,,15 in.	1	0		
	—〃— ....15 ,,18 in.	1	6		
46	Jacksonii..........12 to15 in.	1	6		
	—〃— ....15 ,,18 in.	2	0		
46	Lindleyana ....9 ,,12 in.	2	0		
	—〃— ....12 ,,15 in.	2	6		
	Mitchellii ....12 ,,15 in.	0	9		
	—〃— ....15 ,,18 in.	1	0		

		Each. s.	Each. d.	Doz. s.	Doz. d.
	TAXUS—				
	Mitchellii ....1½to 2 ft.	1	6		
	—〃— ....2 ,, 2½ft.	2	0		
	procumbens ....9 ,,12 in.	1	6		
46	Washingtonii......12 ,,15 in.	1	6		
	—〃— ....15 ,,18 in.	2	0		
	—〃— ....1½,, 2 ft.	2	6		
	THUJA—				
	Defresneana ....9 in.	1	0		
46	dumosa ....6 to 9 in.	1	0		
47	gigantea ....9 ,,12 in.	1	3		
	—〃— ....1 ,, 1½ft.	1	6		
	—〃— ....1½,, 2 ft.	2	0		
	—〃— ....2 ,, 2½ft.	2	6		
	—〃— ....2½,, 3 ft.	3	0		
	—〃— ....3 ,, 3½ft.	3	6		
	—〃— ....3½,, 4 ft.	5	0		
	globosa ....6 ,, 9 in.	1	0		
	Hoveyi ....9 ,,12 in.	1	6		
	—〃— ....12 ,,15 in.	2	0		
47	Lobbii ....1 ,, 1½ft.	0	5	4	0
	—〃— ....1½,, 2 ft.	0	6	5	0
	—〃— ....2 ,, 2½ft.	0	8	6	0
	—〃— ....2½,, 3 ft.	0	10	8	0
	—〃— ....3 ,, 3½ft.	1	0	10	0
	—〃— ....3½to 4 ft.	1	3	12	0
	—〃— ....4 ,, 5 ft.	1	6		
	—〃— ....5 ,, 6 ft.	2	6		
	—〃— fine specimens ....7/6 to	15	0		
	—〃— atrovirens....9 to 12 in.	1	6		
	—〃— ....12 ,,15 in.	2	0		
	—〃— ....15 ,,18 in.	2	6		
	—〃— erecta ....9 ,,12 in.	0	9		
	—〃— —〃— ......12 ,,15 in.	1	0		
	—〃— —〃— ......15 ,,18 in.	1	6		
	—〃— —〃— ....1½,, 2 ft.	2	0		
	—〃— —〃— ....2 ,, 2½ft.	2	6		
47	—〃— pumila ......1½,, 2 ft.	1	6		
	—〃— —〃— ....2 ,, 2½ft.	2	0		
	—〃— —〃— ....2½,, 3 ft.	2	6		
47	—〃— variegata ....4 ,, 6 in.	2	6		
47	occidentalis ....1 ,, 1½ft.	..		3	0
	—〃— ....5 ,, 6 ft.	1	0	10	0
	—〃— ....6 ,, 7 ft.	1	6		
	—〃— ....7 ,, 8 ft.	2	6		
	—〃— ....8 ,, 9 ft.	3	6		
	—〃— argentea ....4 ,, 6 in.	2	6		
	—〃— Boothi........4 ,, 6 in.	1	6		
47	—〃— compacta ....4 ,, 5 ft.	4	0		
	—〃— —〃—....6 to 7ft., 5/- to	7	6		
	—〃— cristata ......6 ,, 9 in.	1	6		
47	—〃— ericoides......6 ,, 9 in.	2	0		
48	—〃— pendula ......9 ,,12 in.	2	0		
	—〃— ....12 ,,15 in.	2	6		
	—〃— pulcherrima aurea, new, 4 to 6in., 7/6 to	10	6		
48	plicata ....4 to 5 ft.	2	6		
	—〃— ....5 ,, 6 ft.	3	6		
48	—〃— minima......12 ,,15 in.	1	6		
	—〃— —〃— ......15 ,,18 in.	2	0		
48	—〃— —〃— pendula	2	6		
48	Vervaeneana ......9 ,,12 in.	1	0		
	—〃— ....12 ,,15 in.	1	6		
	—〃— ....15 ,,18 in.	2	0		
	—〃— ....1½,, 2 ft.	2	6		
	—〃— ....2 ,, 2½ft.	3	0		
48	Wareana ....2½,, 3 ft.	0	10	9	0

NOTE.—The figures in the first column denote the page in the Descriptive List of the Fir Tribe.

		Each.		Doz.	
		s.	*d.*	*s.*	*d.*
	THUJA—				
	Wareana ....3 to 3½ft.	1	0	10	0
	—″— ....4½,, 5 ft.	2	0		
	—″— ....5 ,, 6 ft.	3	0		
	Zuccarini ....9 ,,12 in.	1	6		
	—″— ....12 ,,15 in.	2	0		
	—″— ....15 ,, 18in.	2	6		
	THUJOPSIS—				
49	borealis ....12 to15 in.	0	9		
	—″— ....15 ,,18 in.	1	0		
	—″— ....1½,, 2 ft.	1	3		
	—″— ....2 ,, 2½ft.	1	6		
	—″— ....2½,, 3 ft.	2	0		
	—″— ....5 ,, 6 ft.	3	6		
	—″— ....6 ,, 7 ft.	5	0		
	—″— compacta ....6 ,, 9 in.	1	0		
	—″— ....9 ,,12 in.	1	6		
	—″— ....12 ,,15 in.	2	0		
49	—″— variegata ....9 ,,12 in.	3	6		
	—″— —″—........12 ,,15 in.	5	0		
49	dolabrata ....4 ,, 6 in.	0	9		
	—″— ....6 ,, 9 in.	1	0		
	—″— ....9 ,,12 in.	1	6		
	—″— ....12 ,,15 in.	2	0		
	—″— decumbens ....4 ,, 6 in.	3	0		
49	—″— variegata ....6 ,, 9 in.	1	0		
	—″— —″— ....9 ,,12 in.	1	6		
	—″— —″— ......12 ,,15 in.	2	0		
49	lætevirens ....6 ,, 9 in.	3	6		

		Each		Doz.	
		s.	*d.*	*s.*	*d.*
	THUJOPSIS—				
49	Standishii ....4 to 6in.	5	0		
	—″— ....9 ,,12in.	2	6		
	TORREYA—				
	myristica ....4 ,, 6in.	2	6		
50	nucifera ....12 to15 in.	3	6		
	—″— ....15 ,,18 in.	5	0		
	WELLINGTONIA—				
50	gigantea............9 ,,12 in.	0	9		
	—″— ....12 ,,15 in.	1	0		
	—″— ....15 ,,18 in.	1	6		
	—″— ....1½,, 2 ft.	2	6		
	—″— ....2 ,, 2½ft.	3	0		
	—″— ....2½,, 3 ft.	3	6		
	—″— ....3 ,, 3½ft.	4	0		
	—″— ....3½,, 4 ft.	5	0		
	—″— ....4 ,, 4½ft.	6	0		
	—″— ....4½,, 5 ft.	7	6		
	—″— ....5 ,, 6 ft.	10	6		
	—″— ......6 to 7ft., 12/6 to	21	0		
51	—″— variegata ....6 to 9 in.	3	6		
	—″— —″— ....9 ,,12 in.	5	0		
	—″— —″— ......12 ,,15 in.	7	6		
	—″— —″— ......15 ,,18 in.	10	6		
	—″— —″— ......1½ ,, 2 ft.	12	6		
	—″— —″— ....2 ,, 2½ft.	15	0		
	WIDDRINGTONIA—				
	cupressoides ....6 to 9 in.	0	9		
	—″— ....12 ,,15 in.	1	6		

NOTE.—The figures in the first column denote the page in the Descriptive List of the Fir Tribe.

DESCRIPTIVE PRICED CATALOGUES

OF THE FOLLOWING

ARE ANNUALLY PUBLISHED, & MAY BE HAD GRATIS ON APPLICATION.

THE FIR TRIBE SUITABLE FOR THE CLIMATE OF THE UNITED KINGDOM, giving their popular and scientific names and derivations, their *habitats*, and the sizes they attain there ; with descriptions of their forms, growths, foliage, uses in the arts, soils and situations adapted for their culture, &c. ; also a copious index of synonyms, and quotations of sizes and prices. *Free by post for Six Stamps.*

FRUIT LIST, containing illustrations of trees trained in the most approved fashions ; remarks as to soils, manures, and drainage ; directions for lifting, planting, branch and root pruning, cropping, and the cultivation and management generally of Fruit Trees, both in the open ground and under glass ; descriptions also of their growths and other peculiarities, and of the forms, colours, and sizes of their fruits, their textures, flavours, seasons, and their durations, uses, &c., with an enumeration of their many synonyms, and a list of prices for trained and untrained Trees.

GARDEN SEED CATALOGUE, including a calendar of operations for each season, and quotations of prices for complete collections of Seeds for Gardens of various sizes, as well as the usual tariff ; hints as to manures, soils, &c. ; remarks also on the qualities, uses, heights, &c., of various vegetables, and on various modes of culture, cropping, storing, &c.

BEDDING PLANTS, comprising the most desirable varieties available for the Terrace Parterre, for the tropical and ordinary Flower Garden, for the mixed border, and for grouping *en masse* with shrubs or on the lawn.

ROSES, containing all the best of the new and old varieties, arranged in their several sections, and fully described as to their shapes, colours, and adaptations ; with ample instructions also as to their treatment, and quotations of prices.

AGRICULTURAL SEED LIST, including, in addition to the ordinary descriptions and priced quotations of Farm Seeds, a description of the most valuable of the NATURAL GRASSES for forage purposes, their names and derivations, produce, periods of infloresence, especial uses, and the soils and situations for which adapted, cultural requirements, prices, &c.

DUTCH BULBS, and other flower roots, giving a full description of the colours, forms, and other peculiarities of each sort, times of planting, and soils suitable, &c., prices and other information.

EVERGREEN AND DECIDUOUS TREES AND SHRUBS, containing selections of the finest Rhododendrons, Hollies, and other Evergreens ; Evergreen and Deciduous Ornamental Trees for Parks, Avenues, &c. ; Deciduous and Evergreen Bushes or Shrubs, Climbers, Trailers, &c. ; their generic, specific, and English names, native countries, heights, times of flowering, and especial adaptations ; sizes, prices, &c.

GREENHOUSE PLANTS, comprising the best selections of Camellias, Azaleas, Ericas, Epacris, Fuchsias, Geraniums, &c., &c.

HERBACEOUS AND ALPINE PLANTS, HARDY FERNS, &c., with descriptions of colour, height, time of flowering, &c.

1875. 1875.

Select Catalogue of

CONIFERÆ

AND OTHER

ORNAMENTAL PLANTS,

ROSES, RHODODENDRONS, FRUIT TREES, ETC.,

OFFERED FOR SALE BY

WILLIAM BARRON & SON,

LANDSCAPE GARDENERS AND NURSERYMEN,

ELVASTON NURSERIES,

BORROWASH, NEAR DERBY.

The Nurseries are within three minutes' walk of the Borrowash Station, on the Midland (Derby and Nottingham) Railway.

P.O. ORDERS MADE PAYABLE AT DERBY.

SEED WAREHOUSE—16, MARKET STREET, NOTTINGHAM.

PRINTED BY BEMROSE AND SONS, LONDON AND DERBY.

INTRODUCTION.

In submitting this Catalogue to the readers of the foregoing work, William Barron and Son beg to state that they have since the establishment of their nurseries more than twenty years' ago, made Coniferæ a speciality, every New Plant introduced into this country during that time having been purchased by them the moment it was in the market.

They have likewise agents in many places abroad, from whom they receive consignments of seed of such varieties as are best re-produced from seed.

By these means, and by the very careful attention bestowed in the cultivation of their plants, their stock of Coniferæ has become celebrated both at home and abroad as being perhaps the best in the trade.

The superiority of their plants is sufficiently established by the fact that, during the last six years, W. B. and Son have constantly exhibited at all the principal shows in the United Kingdom, and have as yet invariably obtained first honours.

They would also particularly call attention to their splendid collection of Ornamental Deciduous Trees; of many of these they cannot speak too highly, it is impossible to over-estimate their value in Landscape Gardening. During the last few years special attention has been devoted to this branch, and, as it has been their personal study to seek out and secure the newest and best varieties, they can with confidence recommend all that they offer.

As great mistakes are made in the treatment of trees after removal, a few practical hints will be furnished to purchasers of large specimens, to insure success.

The General Nursery Stock is extensive and well-grown, and as they pay particular attention to the constant removal of their plants, they are finely rooted, and cannot fail to give satisfaction.

When packed, the balls of the larger plants are completely enclosed in a circular crate, which is drawn tightly round them; in this manner a plant will travel, with a ball several cwt., hundreds of miles without the slightest injury, and will be delivered at its journey's end in as perfect a condition as when removed.

A general descriptive Catalogue will be forwarded, post free, on application; likewise their Seed, Bulb, and Rose Catalogues, the two former published in January and the latter in August.

Landscape Gardening.—Mr. Barron, Sen., who has had great experience in this department, devotes nearly the whole of his time to his profession as a Landscape Gardener. He also gives advice on the management of Woods and Forests.

In addition to furnishing plans, they also undertake all kinds of ground work, the formation of new roads, ornamental water, rockwork, &c., by contract or otherwise.

They keep a staff of experienced foremen to superintend any work that may be entrusted to their care.

Any Plants not enumerated in their Catalogue, Greenhouse, Stove, or otherwise, which their customers may require, if not in stock, they will be happy to procure at the usual prices.

It frequently happens that after trees have been planted a few years, they appear to have been planted too near or in the wrong place, and their possessors would gladly have them placed to greater advantage if they knew it could be done with safety. Their Transplanting Machines, with efficient men for such purposes, can be had at a moderate rate. William Barron being the originator of the most successful system for the removal of large trees, his well-known reputation as a planter, may give confidence to the inexperienced. A few testimonials, selected from many others, received from gentlemen who have used their Machines, will be found at the end of the Catalogue.

Although every care will be taken in the packing of goods, risk of every description, costs of transit, &c., must be borne by the purchaser. No complaint entertained unless made within seven days of the receipt of goods.

To lessen transit expenses, all goods will be consigned at "Owner's Risk" (viz., Purchaser's) unless advised to the contrary.

Elvaston Nurseries, December, 1874.

WILLIAM BARRON & SON'S CATALOGUE.

CONIFERÆ.

New and rare plants are printed in black letter.

ABIES *(Spruce)*—

	Each. s. d.	s. d.
ALBA (*White American*)	1 0	1 6
per doz.	4 0	9 0
per 100	15 0	30 0
ALBERTIANA	1 6	3 6
larger specimens	5 0	10 6
ALCOCQUIANA	5 0	63 0
BICOLOR (*Maximowiczii*)	5 0	10 6
CANADENSIS (*Hemlock Spruce*),		
12 to 15 in. per doz.	4 0	
2 ft. to 3 ft. per doz.	9 0	
larger	1 6	3 6
alba spica	2 6	

Quite new, very beautiful.

	Each. s. d.	s. d.
microphylla		3 6
CŒRULEA per doz.	6 0	9 0
DOUGLASII,		
9 to 12 in. per doz.	4 6	
2 to 3ft. ,,	15 0	18 0
3to 4 ft. ,,	21 0	24 0
4 to 5ft.	2 6	3 6
larger	5 0	10 6
TAXIFOLIA	2 6	10 6
BREVIFOLIA	21 0	

A variety raised by ourselves for which we have obtained several first-class certificates. The leaves are shorter and more obtuse than the type; very dark green, and set on all round the stem after the style of Picea pinsapo.

	Each. s. d.	s. d.
ENGLEMANII,		
12 to 18 in. per doz.	30 0	
candida	21 0	

A very glaucous and beautiful variety of the above; obtained a first-class certificate at the Royal Horticultural Society's Show, Birmingham, June, 1872.

	Each. s. d.	s. d.
EXCELSA,		
ARCHANGELICA	2 6	5 0
AUREA	3 6	
CLANBRASILIANA	5 0	7 6
FINEDONENSIS	2 6	7 6
INVERTA	1 6	5 0
PYGMÆA	5 0	7 6

ABIES *(Spruce.)*

	Each. s. d.	s. d.
HANBURYANA	7 6	31 6
HOOKERIANA	5 0	21 0
MENZIESII,		
2 years' bedded ...per 100	15 0	
3 to 4 ft. per doz.	18 0	
6 to 7 ft.	3 6	5 0
MORINDA	1 0	2 6
NIGRA,		
12 to 18 in. per 100	25 0	
18 to 2 ft. per doz.	5 0	
pumila	5 0	7 6

The original plant of this variety is 12 ft. through, and not more than 5 ft. high.

	Each. s. d.	s. d.
OBOVATA	3 6	5 0
ORIENTALIS,		
2 years' bedded ...per 100	10 0	
15 to 18 in.	1 0	1 6
5 to 7 ft.	10 6	21 0
PATTONIANA	3 6	21 0
PARRYIANA	21 0	
POLITA	3 6	21 0
Sitchensis		
12 to 18 in. per doz.	18 0	
Tsuga Sieboldii (*Japan Hemlock Spruce*) 1 ft. 6 in. to 3 ft. per doz.	10 6	31 6
WHITMANIANA, 15 to 18 in.	1 0	1 6
,, 5 to 7 ft.	10 6	21 0

ARAUCARIA—

	Each. s. d.	s. d.
IMBRICATA (*Chilian Pine*)		
12 to 18 in. per doz.	18 0	
2 to 3 ft.	5 0	7 6
5 to 6 ft.	21 0	31 6
larger	42 0	110 0
aurea variegata	21 0	105 0

A beautiful golden variety of the Araucaria, raised by Mr. Fowler, Castle Kennedy, about 20 years' ago, the original plant being now 22 ft. high, and finely variegated all over the tree.

ARTHROTAXIS (*The jointed Yew*)

	Each. s. d.	s. d.
CUPRESSOIDES	5 0	105 0
LAXIFOLIA (*Gunneana*)	10 6	42 0
SELAGINOIDES (*Donniana*)	7 6	31 6

BIOTA (*The Chinese Arbor Vitæ*)—

CUPRESSÆFORMIS	1 6	3 6
FALCATA	3 6	10 6
globosa gracilis	1 6	5 0
JAPONICA	2 6	21 0
ORIENTALIS,		
1 to 1½ ft. per doz.	4 0	
2 to 3 ft. ,,	9 0	
larger	1 6	3 6
AUREA (*Thuja aurea*)		
9 to 12 in. per doz.	15 0	
12 to 18 in.	2 0	3 6
larger	5 0	21 0
ELEGANTISSIMA		
9 to 12 in.	1 6	2 6
12 to 18 in	2 6	3 6
larger	5 0	10 6
delicatissima	21 0	
Quite new, rich cream colour.		
SEMPERAURESCENS, 6 to 9 in ... per doz.	18 0	
larger	2 6	10 6
VARIEGATA AUREA	2 6	21 0
ZUCCARINIANA	1 6	5 0
TARTARICA per doz.	6 0	12 0
TRIANGULARIS	3 6	5 0

CEDRUS—(*The Cedar.*)

Atlantica,		
9 to 12 in. per 100	15 0	
18 in. to 2 ft. per doz.	8 0	
2 to 3 ft.	1 0	1 6
3 to 4 ft.	1 6	2 6
Deodara,		
2 years' bedded ... per 100	15 0	
9 to 12 in. per doz.	8 0	
12 to 18 in. ,,	15 0	
3 to 4 ft.	3 6	5 0
larger	10 6	31 6
alba spica	2 6	5 0
Very distinct and beautiful.		
ROBUSTA	2 6	7 6
verticellata glauca	2 6	5 0
Lebani, 12 to 18in.	1 0	1 6
larger	2 6	7 6

CEPHALOTAXUS (*The Clustered flowered Yew*)—

DRUPACEA, 9 to 12in.	1 6	2 6
larger	5 0	42 0
Fortunei, 12 to 18in.	1 0	1 6
larger	3 6	42 0
PEDUNCULATA	1 6	2 6

CHAMÆCYPARIS (*The White Cedar*)—

	Each. s. d.	s. d.
SPHÆROIDEA	1 0	2 6
aurea	5 0	10 6
GLAUCA	1 6	2 6
VARIEGATA—		
12 to 18in.	1 0	1 6
2 to 3ft.	2 0	3 0
4 to 5ft.	5 0	7 6

CRYPTOMERIA (*The Japan Cedar*)—

ELEGANS,		
9 to 12in. per doz.	6 0	
12 to 18in. ,,	9 0	
2 to 3ft.	2 6	3 6
larger	5 0	10 6
Japonica, 5 to 7ft.	2 6	5 0
ARAUCARIOIDES	1 6	2 6
Lobbii, 5 to 7ft.	2 6	5 0
NANA	1 0	7 6
VARIEGATA	3 6	5 0

CUPRESSUS (*The Cypress*)—

Corneyana	2 6	3 6
FUNEBRIS, 18in. to 2ft.	1 6	2 6
Goveniana,		
18in. to 2ft. per doz.	9 0	12 0
Lambertiana, 2 to 2½ft.	1 6	2 0
alba variegata	3 6	7 6
Lawsoniana,		
12 to 18in. per doz.	2 6	
per 100	17 6	
18in. to 2ft. per doz.	5 0	
per 100	30 0	
3 to 4ft. ... per doz. 9/-	1 0	1 6
4 to 5ft. ... ,, 18/-	1 6	2 6
6 to 8ft.	5 0	7 6
larger	10 6	21 0
ALBA PENDULA	2 6	10 6
SPICA	2 6	10 6
nana	...	10 6

Perfectly new and distinct, the brightest of any of the white tipped varieties.

ALBA VARIEGATA	1 6	5 0
ARGENTEA, 12 to 18in.	1 6	2 6
larger	3 6	10 6
AUREA VARIEGATA	1 0	7 0
ERECTA VIRIDIS	1 6	3 6
GRACILIS	1 0	3 6
lutea	3 6	21 6

A lovely golden compact-growing variety of C. Lawsoniana. It reatins its golden hue throughout the year. We have thoroughly tested its power of enduring sun heat, and can recommend it as one of the hardiest and richest of coloured Conifers.

CUPRESSUS (*The Cypress*)

	Each. s. d.		s. d.
LAWSONIANA			
NIVEA	1 6	...	2 6
PYGMÆA	1 0	...	3 6
STRICTA	1 6	...	5 0
VERVAENEANA	1 6	...	2 6
LUSITANICA	1 0	...	...
MACROCARPA	1 0	...	2 6
McNABIANA	1 0	...	2 6
NUTKAENSIS (*Thujopsis borealis*),			
8in. to 2ft. .... per doz.	12 0		
2 to 3ft.	1 6	...	2 6
4 to 6ft.	5 0	...	7 6
glauca	1 0	...	1 6
nana compacta	3 6	...	5 0
PENDULA,			
18in. to 2ft. ......per doz.	12 0		
2 to 3ft. .... ,,	18 0		
4 to 6ft.	3 6	...	7 6
VARIEGATA ALBA	1 6	...	2 6
AUREA	1 6	...	2 6
TORULOSA	1 0	...	2 6
TOURNEFORTII	1 0	...	1 6

DACRYDIUM—

FRANKLINII	1 6	...	2 6

FITZROYA—

PATAGONICA	1 6	...	5 0

JUNIPERUS (*The Juniper*)—

CHINENSIS,			
12 to 18in. .... per doz.	9 0		
2 to 3ft. .... ,,	18 0		
4 to 5ft.	2 6	...	5 0
larger trained	5 0	...	10 6
aurea	5 0	...	42 0
(JAPONICA) VARIEGATA,			
9 to 12in. ...... per doz.	18 0		
12 to 18in.	3 6	...	5 0
larger	7 6	...	21 0
COMMUNIS PENDULA	1 6	...	2 6
CRACOVIA .... per doz.	9 0	...	12 0
CUPRESSÆFOLIA	1 6	...	2 0
DRUPACEA	1 6	...	5 0
ECHINIFORMIS	2 6	...	
EXCELSA	1 0	...	2 6
STRICTA, 9 to 12in. per dz.	18 0		
larger	2 6	...	21 0
FRAGRANS	1 6	...	5 0
HIBERNICA,			
12 to 18in. ....per doz.	6 0		
2 to 3ft.	1 0	...	1 6
COMPRESSA	1 6	...	2 6
JAPONICA, 12 to 18in.	1 0	...	1 6
2 to 3ft.	2 6	...	5 0
alba variegata	5 0	...	10 6
aurea	5 0	...	31 6
variegata	5 0	...	10 6
NANA	1 6	...	5 0

JUNIPERUS (*The Juniper*)—

	Each. s. d.		s. d.
MACROCARPA	2 6	...	5 0
MELDENSIS	2 6	...	5 0
OBLONGA PENDULA	1 0	...	1 6
PHŒNICEA	1 6	...	7 6
PROCUMBENS	1 0	...	1 6
PROSTRATA	1 0	...	1 6
RECURVA DENSA	1 0	...	2 6
RIGIDA	2 6	...	3 6
SABINIANA,			
12 to 18in. ....per doz.	5 0		
2 to 3ft. .... ,,	18 0		
VARIEGATA	1 6	...	2 6
SPHŒRICA	2 6		
SQUAMATA	1 6	...	2 6
SUECICA, 6 to 9in. per doz.	6 0		
18in. to 2ft. .... ,,	12 0		
TAMARISCIFOLIA...... ,,	9 0	...	18 0
trained as pyramids.			
3 to 4ft.	5 0	...	7 6
THURIFERA,			
2 to 3ft. .... per doz.	18 0		
7 to 8ft.	7 6	...	10 6
TRIPARTITA, 12 to 15in.	1 0	...	1 6
VIRGINIANA, 3 to 4ft.	1 0	...	1 6
4 to 5ft.	1 0	...	2 6
ARGENTEA VARIEGATA ...	2 6	...	5 0
AUREA ,, ...	2 6	...	5 0
GLAUCA, 2 to 3ft.	2 6	...	3 0
4 to 5ft.	5 0	...	7 6
VENUSTA, 12 to 18in.	1 6	...	2 0

LARIX (*The Larch*)—

KÆMPFERI (*The Golden or Chinese*),			
2 years' seedlings	5 0		
larger	7 6	...	21 0

LIBOCEDRUS (*The Incense Cedar*)—

CHILENSIS	2 6	...	5 0
VIRIDIS	2 6	...	5 0
DECURRENS (*Thuja Gigantea*),			
12 to 18in. ....per doz.	18 0		
18in. to 2 ft, ...	1 6	...	2 6
larger	7 6	...	21 0
TETRAGONA	5 0	...	7 6

PICEA—(*The Silver Fir*)

AMABILIS (true)	3 6	...	21 0
APOLLINIS	1 0	...	1 6
BRACTEATA	7 6	...	10 6
CEPHALONICA, 12 to 18in....	1 6	...	2 6
larger	3 6	...	5 0
CILICICA	3 6	...	7 6
Concolor	63 0		

A new Californian Picea discovered by M. Roezl, with long leaves and very glaucous foliage; apparently a variety between P. nobilis glauca and P. Parsonsi. One of the greatest acquisitions introduced for many years.

PICEA—(*The Silver Fir.*)

	Each.	
	s. d.	s. d.
GRANDIS	7 6	42 0
MAGNIFICA,		
6 to 9in. per doz.	2 6	3 6
larger	5 0	42 0
NOBILIS,		
6 to 12in. per doz.	6 0	
per 100	45 0	
18 to 2ft. per doz.	24 0	
per 100	160 0	
2 to 3ft.	3 0	7 6
larger	10 6	105 0
Being the largest holders in the trade of this magnificent tree, we are enabled to offer it at such an extremely low figure as we hope will induce our customers to purchase largely.		
FIRMA	3 6	10 6
NORDMANNIANA,		
2 years per 100	20 0	
12 to 15in. per doz.	12 0	
15 to 18 in. ,,	18 0	
2 to 3ft.	3 6	10 6
larger	21 0	105 0
ARGENTEA	5 0	10 6
Obovata	10 6	
NUMIDICA	2 6	3 6
PARSONSI per doz.	12 0	
4 to 5ft.	21 0	31 6
6 to 7ft.	42 0	63 0
larger	105 0	110 0
PINDROW	1 6	3 6
PINSAPO,		
9 to 12in. per doz.	12 0	
18in. to 2ft.	2 6	3 6
3 to 4ft.	10 6	21 0
larger	31 6	105 0
WEBBIANA,		
6 to 9in. per doz.	18 0	
larger	5 0	21 0

PINUS—(*The Pine*)

	s. d.	s. d.
ARISTATA	2 6	5 0
AUSTRIACA,		
12 to 18in. per 100	7 6	
per 1000	60 0	
18in to 2ft. per 100	10 0	
2ft. 6in. to 3ft. per 100	40 0	
3 to 4ft.	1 0	1 6
per 100	75 0	
4 to 5ft.	1 6	2 6
larger	3 6	7 6
BENTHAMIANA,		
9 to 12in. per doz.	12 0	
3 to 4ft.	3 6	5 0
larger	5 0	10 6
BUNGEANA	2 6	5 0
CEMBRA,		
12 to 18in. per doz.	5 0	
per 100	30 0	
2 to 3ft., per doz.	12 0	
larger	2 6	7 6

PINUS—(*The Pine.*)

	Each.	
	s. d.	s. d.
CONTORTA,		
12 to 18in., per doz.	15 0	
larger	3 6	10 6
COULTERI	1 0	1 6
DENSIFLORA per doz.	12 0	15 0
DON PEDRO	3 6	5 0
EXCELSA,		
12 to 18in., per doz.	12 0	
2ft. 6in. to 3ft.	2 0	2 6
FLEXILIS, 6 to 12in.	2 6	5 0
2 to 3 ft.	7 6	10 6
FISCHERII	1 0	1 6
FREEMONTIANA	1 0	1 6
GERARDIANA	1 0	2 0
HAMILTONI	1 0	1 6
INSIGNIS,		
9 to 12in., per doz.	6 0	
per 100,	40 0	
18in. to 2ft. per doz.	12 0	
4 to 5ft.	2 6	3 6
Transplanted in autumn.		
JEFFREYII, 12 to 18in.	1 6	2 6
2 to 3ft.	3 6	7 6
KORAIENSIS	1 0	7 6
LAMBERTIANA, 1 to 2ft.	1 6	2 6
larger	3 0	7 6
LARICIO,		
12 to 15in. per 100	10 0	
1ft. 6in. to 2ft. 6in. ,,	20 0	
2 to 3ft. ,,	30 0	
MCINTOSHIANA, (see contorta)		
MACROCARPA	1 0	1 6
MANDSCHURICUS	2 6	
MARITIMA,		
9 to 12in. per 1000	25 0	
MONTICOLA, 15 to 18in.	2 6	
2 to 3ft.	3 6	5 0
PALUSTRIS	5 0	10 6
PALLASIANA,		
12 to 18in. per doz.	12 0	
larger	1 0	3 6
parviflora, 6 to 12in.	3 6	5 0
2ft. to 2ft. 6in.	10 6	15 0
PEUCE, 6 to 9in.	1 6	2 6
3 to 4ft.	7 6	10 6
PONDEROSA, 18in. to 2ft.	2 6	3 6
larger	5 0	7 6
PYRENAICA,		
6 to 12in. per doz.	6 0	
18in. to 2ft. ,,	10 0	
3 to 4ft.	2 0	3 0
RIGIDA, 9 to 12in. per doz.	6 0	
larger	1 6	2 6
ROMANA, 3 to 4ft.	1 0	1 6
4 to 5ft.	1 6	2 6
SABINIANA	1 0	2 6
SALZMANNI, 9 to 15in.	1 6	2 6
SINCLAIRIANA	1 0	1 6

PINUS—(*The Pine.*)

	Each. s. d.	s. d.
STROBUS,		
tabulæformis	5 0	7 6

A very pretty dwarf variety, growing not more than one or two feet high, but with a dense spreading head of a flat tabular form.

	Each. s. d.	s. d.
SYLVESTRIS (see Forest trees.)		
aurea	5 0	7 6

A dwarf-growing variety of the Scotch Fir, which turns to a brilliant yellow in winter.

	Each. s. d.	s. d.
TABULÆFORMIS	3 6	5 0
TAURICA, 6in. per 100	20 0	
larger	1 0	2 6
TORREYANA, 12 to 18in.	3 6	5 0
TUBERCULATA,		
2ft. 6in. to 4ft.	3 6	5 0

PODOCARPUS (*The long-stalked Yew.*)

	Each. s. d.	s. d.
ALPINA	1 0	3 6
ANDINA	1 6	2 6
ELEGANTISSIMA	5 0	10 6
MACROPHYLLA ALBA VARIEGATA	5 0	10 6
AUREA ,,	5 0	10 6

PRUMNOPITYS (*The elegant Plum Fruited Pine.*)

	Each. s. d.	s. d.
ELEGANS	1 0	2 6

RETINOSPORA (*The Japan Cypress*)—

	Each. s. d.	s. d.
ERICOIDES,		
9 to 12in. per doz.	6 0	
12in. to 2ft.	1 0	2 0
DECUSATA	1 6	5 0
FILICOIDES	1 6	7 6
FILIFERA	2 6	7 6
LEPTOCLADA,		
6 to 9in. per. doz.	12 0	
larger	1 6	10 6
LYCOPODIOIDES	2 6	21 0
OBTUSA, 12 to 18in., per doz.	8 0	
2 to 3ft., per doz., 21/-	1 6	2 6
larger	2 6	21 0
alba spica	2 6	5 0

The young shoots of this plant are quite white when they first break out, and they remain so for about three months, when they become green; very distinct.

	Each. s. d.	s. d.
ALBA VARIEGATA	2 6	5 0
aurea	2 6	63 0
gracilis (Veitch)	5 0	
nana	2 6	42 0
COMPACTA, 6 to 9in.	1 0	7 6
Ketleerii variegata	3 6	5 0

RETINOSPORA (*The Japan Cypress*)—

	Each. s. d	s. d.
MAGNIFICA	1 0	3 6
nana compacta	3 6	7 6

This variety differs considerably from R. Pygmæa; it is evidently the green type of R. obtusa aurea nana, and is of exceedingly compact and symmetrical growth. The leaves are a dark green above, and very glaucous underneath. It is still comparatively new and scarce.

	Each. s. d	s. d.
PYGMÆA	2 6	7 6
PISIFERA,		
18in. to 2ft. per doz.	9 0	
2 to 3ft.	1 0	1 6
larger	2 6	10 6
aurea	10 6	

This is the true R. pisifera aurea, not a variety of R. plumosa aurea.

	Each. s. d	s. d.
GRACILIS, 12 to 15 in.	1 6	2 6
NANA AUREA VARIEGATA	5 0	7 6
PLUMOSA, 9 to 12in. per doz.	12 0	
18in. to 2ft.	2 6	3 6
larger	7 6	21 0
ALBA VARIEGATA	1 6	7 6
ARGENTEA	1 0	31 6
AUREA	1 0	105 0
FLAVESCENS	1 0	3 6
SQUARROSA 6 to 9in., per doz.	9 0	
12 to 18in.	1 6	2 6
larger	3 6	10 6
GLAUCA, 12 to 18in.	1 6	2 6

SALISBURIA—

	Each. s. d	s. d.
ADIANTIFOLIA	1 0	2 6

SCIADOPITYS—

	Each. s. d	s. d.
VERTICELLATA, (*The Umbrella Pine*)—	3 6	63 0

TAXODIUM-DISTICHUM

	Each. s. d	s. d.
18in. to 2ft. per doz.	18 0	
SEMPERVIRENS, 3 to 4ft.	1 6	2 6
alba spica	5 0	21 0

The whole plant is of a bluish tint, excepting the points of the shoots, which are of a pale yellow, very distinct.

TAXUS (*The Yew*)—

	Each. s. d	s. d.
ADPRESSA, 3 to 4ft.	5 0	10 6
4 to 5ft.	10 6	15 0
5ft. to 5ft. 6in.	31 6	42 0

Perfect plants trained in the form of Pyramids.

	Each. s. d	s. d.
STRICTA	1 0	3 6

TAXUS—(*The Yew.*)

	Each. s. d.	 s. d.
BACCATA (common yew),		
9 to 12in............per 100	18 0	
12 to 18in............ ,,	30 0	
18in. to 2ft..........per doz.	6 0	
per 100	40 0	
3 to 4ft.	1 6	2 6
larger	3 6	10 6
ELEGANTISSIMA,		
12 to 18in.......per doz.	24 0	
18in. to 2ft.	2 6	3 0
larger	3 0	63 0
Elvastonensis aurea	5 0	21 0

This most remarkable and distinct variety originated at Elvaston Castle. It is a bright orange colour, and unlike all other Golden or Silver Yews, is not variegated but a self colour; it is by far the most brilliant of any in the winter.

	s. d.	s. d.
FASTIGIATA, 2ft., ...per doz.	9 0	
4 to 5ft.	2 0	3 0
larger	3 6	10 6
VARIEGATA,		
6 to 9in. ......per doz.	24 0	
18in. to 2ft.	5 0	7 6
AUREA (Standish's)	5 0	7 6
FOXII ....per doz.	9 0	
FRUCTU LUTEA	1 0	5 0
GLAUCA (Blue John)	1 0	5 0
GRACILIS	1 0	1 6
HODGTONII	1 0	1 6
NIDPATHENSIS	1 0	3 6
MITCHELLIANA	1 6	2 6
PYRAMIDALIS	1 0	2 6
VARIEGATA	1 6	2 6
VARIEGATA AUREA (old gold striped.)		
9 to 12in..........per doz.	15 0	
12 to 18in.......... ,,	24 0	
2ft. 6in. to 3ft. 6in.	7 6	10 6
4ft.	15 0	21 0
5 to 8ft	25 0	105 0

The magical effect produced by this lovely plant in landscape gardening must be seen to be understood.

We have the largest stock of specimen plants in existence, all trained as pyramids; they vary in price according to substance.

	s. d.	s. d.
BARRONI FŒMINA	5 0	42 0

A seedling, raised by ourselves from the old golden yew, but is much freer in growth and brighter in colour. It is very symmetrical in habit. Our original plant, now about 5ft. high, is upwards of 7ft. in diameter at the base, and forms a perfect pyramid. The fact of its being a female plant greatly enhances its value, as all the plants of Taxus baccata variegata aurea, or golden yew, with the exception of the tree from which this was raised, are male plants. It has obtained first-class Certificates and Prizes at every show at which it has been exhibited.

	Each. s. d	 s. d.
BACCATA WASHINGTONI	1 0	2 6
CANADENSIS	1 0	2 6
VARIEGATA AUREA	2 6	5 0
CUSPIDATA	1 0	1 6
DOVASTONII, with leaders	5 0	15 0
standards, with very fine heads ....per pair	105 0	
AUREA VARIEGATA, with leaders	10 6	21 0

THUJA (*The arbor-vitæ*)—

	s. d.	s. d.
AUREA (*see Biota*)		
ASPLENIFOLIA	5 0	
CAUCASICA (*see Siberica*)		
DORKINGENSIS	2 6	3 6
ERICOIDES (*Ellwangeriana*) per doz.	12 0	
FALCATA (*see Biota falcata*)		
GIGANTEA (*see Libocedrus decurrens*)		
MENZIESI, or LOBBI,		
18in. to 2ft., ... per doz.	5 0	
,, 100	35 0	
3 to 4ft. .... per doz.	15 0	
4 to 6ft.	1 6	2 6
larger	3 6	10 6
NANA	2 6	3 6
OCCIDENTALIS,		
3 to 4 ft. .... per 100	40 0	
4 to 5 ft. ....per doz.	9 0	
,, 100	60 0	
alba spica	10 6	
PLICATA	1 6	3 6
per doz.	18 0	
PENDULA	1 6	2 6

This is scarce and very beautiful.

	s. d.	s. d.
PYGMÆA	2 6	3 6
PYRAMIDALIS,		
3 to 4ft., ... per 100	40 0	
4 to 5ft., ...per doz.	9 0	
,, 100	60 0	
SIBERICA,		
2 to 3ft., ...per doz.	6 0	
,, 100	40 0	
larger	1 0	1 6
Standards, 5 to 6ft.	2 6	
VERVÆNEANA, 2ft. 6in. to 3ft.	3 6	5 0

THUJOPSIS (*The broad leaved Arborvitæ*)—

	s. d.	s. d.
DOLOBRATA,		
9 to 12in............per doz.	15 0	
12 to 15in. .... ,,	24 0	
larger	5 0	105 0

	Each.	
	s. d.	s. d.
THUJOPSIS—(*The broad leaved Arborvitæ.*)		
ROBUSTA DECUMBENS (heights and prices as above)		
VARIEGATA,		
9 to 12in. per doz.	15 0	
12 to 15in. ,,	24 0	
larger	5 0	105 0
LÆTEVIRENS,		
6 to 9in. per doz.	12 0	
9 to 12in.	2 6	3 6
larger	5 0	21 0
STANDISHII	5 0	
TORREYA (*The Fœted Yews*)		
GRANDIS	3 6	10 6
MYRISTICA	1 6	2 0
NUCIFERA	2 6	3 6
TAXIFOLIA	5 0	

	Each.	
	s. d.	s d
WELLINGTONIA GIGANTEA—		
1 year in single pots, per 100	30 0	
2 years ,, ,,	50 0	
6 to 9in. per doz.	9 0	
3 to 4ft.	3 6	5 0
4 to 6ft.	5 0	7 6
per doz.	72 0	
larger	10 6	31 6
Variegata	3 6	42 0
alba spica	21 0	31 6
flavescens	21 0	31 6
WIDDRINGTONIA—		
CUPRESSOIDES GLAUCA	1 0	1 6

DECIDUOUS ORNAMENTAL & FLOWERING TREES AND SHRUBS.

	Each.	
	s d.	s. d.
ACER (*Maple*)—		
COLCHICUM RUBRUM	1 6	2 6
CORSTORPHINENSIS	1 6	2 6
LÆVIGATA	1 0	2 6
LOBELLII	1 0	2 6
MACROPHYLLUM	1 6	2 6
NEGUNDO per doz.	6 0	
VARIEGATA (dwarfs) ,,	12 0	18 0
standards, 3 to 5ft.	1 6	3 6
OBTUSATUM	1 0	3 6
PENSYLVANICUM (*striatum*)	1 0	1 6
PLATANOIDES DISSECTUM	1 0	2 6
CUCCULATUM	1 6	2 6
LACINIATA	1 0	3 6
Schwedleerii	3 6	5 0
umbraculifera	7 6	
polymorphum (*palmatum*)	2 6	3 6
atropurpureum	2 6	10 6
disectum rubrum	10 6	31 6
variegata	10 6	31 6
PALMATIFIDIUM	7 6	21 0
ROSEO MARGINATUM	5 0	21 0
RUBRUM	2 6	10 6
PSEUDOPLATANUS (*sycamore*)		
LEOPOLDI	1 6	2 6
PURPUREA VARIEGATA	1 0	3 6

	Each.	
	s. d.	s. d.
ACER—*Maple.*		
PSEUDOPLATANUS VARIEGATA	1 0	1 6
RUBRUM	1 6	2 6
RUFINERVA	7 6	
RUGOSUM	7 6	
SACCARINUM per doz.	6 0	12 0
TARTARICUM ,,	9 0	
TRILOBATUM	7 6	
WAGNERII LACINIATA	2 6	3 6
ÆSCULUS (*Horse Chestnut*)		
HIPPOCASTANUM DISCOLOR	1 0	2 6
FLORE PLENO	1 0	3 6
LACININTA	1 6	2 6
RUBRA	1 0	1 6
larger	2 6	7 6
JAPONICA	2 6	3 6
MEMINGERII	2 6	
RUBICUNDA	1 0	3 6
WHITLEYII	1 0	1 6
FOL MARGINATA	1 0	1 6
SPECTABILIS	1 0	1 6
PAVIA (*smooth fruited Horse Chestnut*)		
ARGUTA	1 0	1 6
CALIFORNICA	1 0	1 6

ÆSCULUS (*Horse Chestnut.*)

	Each. s. d.	s. d.
FLAVA	1 0	1 6
GLABRA	1 0	1 6
HYBRIDA	1 0	1 6
HUMILIS	1 0	1 6
MACROCARPA	1 0	1 6
MARYLANDICA	1 0	1 6
LUTEA	1 0	1 6
LYONI	1 0	1 6
NEGLECTA	1 0	1 6
PUMILA	1 0	1 6
SANGUINEA	1 0	1 6

AILANTHUS GLANDULOSA (*Tree of Heaven*)—

	s. d.	s. d.
AILANTHUS GLANDULOSA (*Tree of Heaven*)	1 0	1 6

ALNUS (*Alder*)—

	s. d.	s. d.
CORDATA	1 0	1 6
glutinosa aurea	3 0	5 0
IMPERIALIS	1 6	2 6
LACINIATA	2 6	3 6
INCANA	2 6	3 6
Japonica	5 0	
macrophylla	3 6	
oxicanthifolia	1 6	3 6
rubronerva	2 6	3 6

AMELANCHIOR-

	s. d.	s. d.
FLORIDA	1 6	
GRANDIFLORA	1 6	
OVALIS	1 6	

AMYGDALUS (*almond*)—

	s. d.	s. d.
COMMUNIS per doz.	18 0	
PERSICA (*Double flowering Peach*)	18 0	30 0
foliis purpureis (*purple leaved Peach*)	21 0	

AMORPHA FRUTICOSA

	s. d.	s. d.
per doz.	6 0	9 0

ARALIA—

	s. d.	s. d.
SPINOSA	1 6	2 6

BETULA (*Birch*)—

	s. d.	s. d.
ALBA (*silver barked*)		
6 to 8ft. per doz.	9 0	12 0
8 to 10ft. ,,	12 0	18 0
10 to 12ft. ,,	18 0	24 0
fastigiata nova	3 6	
devonica vera	3 6	
LACINIATA PENDULA, standards	2 6	3 6
LENTA per doz.	6 0	9 0
NIGRA	1 0	1 6
PERSICIFOLIA	1 0	1 6
PLATYPHYLLA	3 6	5 0
PENDULA, standards (*Young's new Weeping*)	3 6	5 0
PURPUREA	21 0	

BROUSSONETIA—

	Each. s. d.	s. d.
PAPYRIFERA	1 0	

CARAGANA (*Siberian pea tree*)

	s. d.	s. d.
ARBORESCENS 4ft....per doz.	6 0	9 0
PENDULA	2 6	
VARIEGATA	5 0	
Gerardiana	3 6	

CARPINUS (*Hornbeam*)—

	s. d.	s. d.
BETULA INCISA	1 6	3 6
AUREA VARIEGATA	3 6	
FOL. ALBO	3 6	

CASTANEA—

	s. d.	s. d.
CHINENSIS	1 6	2 6
VESCA ASPLENIFOLIA	1 6	2 6
ALBO MARGINATA	1 6	2 6
AUREA	1 6	2 6
CUCCULATA	1 6	2 6
DISSECTA	1 6	2 6
GLABRA	1 6	2 6
HETEROPHYLLA	1 6	2 6
FILIPENDULA	1 6	2 6

CATALPA—

	s. d.	s. d.
SYRINGÆFOLIA	1 6	2 6
aurea	3 6	7 6

A magnificent variety of C. syringæfolia, the leaves are of a brilliant yellow and are not affected by the most tropical sun. It is an excellent acquisition to our gardens.

CERASUS (*Cherry*)—

	s. d.	s. d.
FLORE PLENO, standards	2 6	
NOVA	2 6	
MAHALEB FOL. VARIEGATA, per doz.	4 0	
,, ,, standards	2 6	

CERCIS—

	s. d.	s. d.
SILIQUASTRUM (*Judas Tree*)	1 0	1 6
VARIEGATUM	3 6	

COLUTEA (*Bladder Senna*)

	s. d.	s. d.
ARBORESCENS per doz.	6 0	
LACINIATA DISSECTA	1 6	2 6

CORNUS (*Dogwood*)—

	s. d.	s. d.
ALBA per doz.	6 0	
MASCULA ,,	4 0	6 0
VARIEGATA, pyramids	1 6	2 6
,, standards	3 6	5 0
SANGUINEA per doz.	4 0	9 0
SIBERICA	1 0	
VARIEGATA	2 6	5 0

CORYLUS—

	Each. s. d.	s. d.
AVELLANA FOL. PURPUREA (*Purple Filbert*), per doz.	9 0	
AUREA	7 6	

CRABOWSKIA—

BŒRHAAVŒFOLIA ...per doz.	18 0	

CRATŒGUS (*Hawthorn*)—

OXYOCANTHA ALBA FLORE-PLENO (*double white*)	1 0 ...	1 6
COCCINEA (*scarlet*)	1 0 ...	1 6
PUNICEO FLORE PLENO (*Paul's double crimson*)	1 6 ...	2 0
ROSEA FLORE PLENO (*double pink*)	1 0 ...	1 6
HORRIDA	2 6	
FILICIFOLIA	2 6	
PENDULA	2 6	
MACRANTHA	2 6	
CELSIANA	2 6	
POPULIFOLIA	2 6	
45 named varieties	1 6 ...	2 6

CYDONIA (*Japonica*)—

per doz.	4 0	

CYTISUS—

ALPINUS (*Scotch Laburnum*) per doz.	4 0 ...	9 0
ELONGATUS ,,	3 0 ...	4 0
LABURNUM ,,	4 0 ...	6 0
extra strong	1 0 ...	1 6
PURPUREA	1 0 ...	1 6
PENDULA, standards	3 0	
SEROTINA, *autumn flowering*	1 0 ...	1 6
NIGRICANS ...per doz.	4 0 ...	6 0
PURPUREUS ,,	4 0 ...	6 0
SECUNDUS ,,	4 0 ...	6 0

DAPHNE—

MEZEREUM ALBA...per doz.	6 0 ...	12 0
ATROPURPUREA ... ,,	6 0 ...	12 0

DEUTZIA—

CRENATA FL. PLENO,		
2 to 3ft. ...per 100	15 0	
4 to 5ft. ...per doz.	6 0	
per 100	35 0	
GRACILIS ...per doz.	3 0 ...	6 0
FOL. ARGENTEA MARMORATA	2 6	
MARMORATA ...per doz.	9 0 ...	12 0
SCABRA ,,	5 0	

DIMORPHANTHUS—

Mandschuricus	3 6 ...	5 0

FAGUS (*Beech*)—

	Each. s. d.	s. d.
SYLVATICA ASPLENIIFOLIA (*Fern leaved*)	1 6	
ATROPURPUREA (*new dark purple*)	1 6 ...	3 6
CRISTATA (*crested*)	1 6 ...	2 6
CUPREA	1 6	
FERRUGINEA LATIFOLIA	1 6	
HETEROPHYLLA	1 6 ...	2 6
MACROPHYLLA	1 6 ...	2 6
NIGRA	1 6 ...	2 6
PENDULA, standards	2 6 ...	5 0
PUPUREA (*Purple Beech*),		
18in. to 2ft. 6in. per doz.	4 0	
per 100	30 0	
2ft. 6in. to 3ft 6in., per doz.	8 0	
per 100	50 0	
3ft. 6in. to 4ft.	1 0 ...	1 6
larger	2 6 ...	5 0
PENDULA	5 0	
VARIEGATA	2 6 ...	3 6

FORSYTHIA—

SUSPENSA ...per doz.	9 0 ...	12 0
VIRIDISSIMA ,,	9 0 ...	12 0
fol. variegata	3 6	

FRAXINUS—

ACUMINATA ...per doz.	9 0 ...	12 0
AMERICANA ,,	6 0 ...	9 0
ARBUTIFOLIA	1 0 ...	1 6
AUCUBÆFOLIA	1 6	
CAROLINIANA ...per doz.	12 0	
JUGLANDIFOLIA	1 6	
PENNSYLVANICA	1 0 ...	1 6
PUBESCENS ...per doz.	9 0 ...	12 0
ALBO MARGINATA	1 0 ...	1 6
LONGIFOLIA	1 6	
SAMBUCIFOLIA ...per doz.	9 0	
CRISPA	1 6	
ANGUSTIFOLIA	1 6	
ARGENTEA	1 6	
EDENTATA	1 6	
EXCELSIOR ASPLENIIFOLIA	1 6	
AUREA	1 6 ...	2 6
PENDULA	1 6	
CONCAVÆFOLIA FOL. VARIEGATA	1 6	
CRISPA	1 6	
LINEARIS	1 6	
PENDULA (*Weeping Ash*)	2 6 ...	5 0
VARIEGATA	5 0	
SIMPLICIFOLIA	2 6	
LACINIATA	1 6	
SPECTABILIS	2 6	
MIXTA	1 6	
ORNUS (*flowering Ash*), per doz.	9 0 ...	12 0

	Each.	
	s. d.	s. d.
GENISTA—		
PRÆCOX	1 0	1 6
PURGANS, standards	3 6	
Other sorts per doz.	9 0	18 0
GLEDITSCHIA—		
FONTANESII	1 0	
HORRIDA	1 0	
HELWINGIA—		
RUSCIFOLIA	2 6	
HIBISCUS (*Althea frutex*),		
SYRIACUS ALBO PLENUS	per doz. 9/- to 12/-	
AZUREA PLENUS		
CŒRULEUS		
ELEGANTISSIMA		
FASTUOSUM		
FLAVO PLENUS		
FLORE CARNEO PLENO		
FOL. TRICOLOR		
LADY STANLEY		
LEOPOLDII		
PURPUREUS		
PURPUREO PLENUS FOL. VARIEGATIS	5 0	
RANUNCULÆFORMIS	per doz. 9/- to 12/-	
ROSEO PLENUS		
VIOLACEO PLENUS		
SPECIOSUS,		
HYDRANGEA—		
HORTENSIS per doz.	9 0	12 0
NIVEA ,,	9 0	12 0
VARIEGATA ,,	12 0	15 0
JAPONICA	1 0	1 6
PANICULATA GRANDIFLORA, strong flowering plants	1 6	
Enormous upright spikes of bloom, opening greenish yellow, and soon changing to pure white, lasting a great length of time; quite hardy.		
OTAXA	1 6	
Magnificent variety, with heads of bloom twice the size of H. hortensis, which it resembles in every other respect.		
QUERCIFOLIA	1 6	
STELLATA PROLIFERA	1 6	
Double pink star-shaped flowers (*bracts*) in large bouquets; small foliage, dwarf habit, a beautiful variety. First-class certificate at the Royal Horticultural Show, 1870,		
IDESIA—		
POLYCARPA (*polycarpa Maximowiczii*, strong	7 6	
A hardy fruiting shrub from the North of China; fine foliage.		

	Each.	
	s. d.	s. d.
JUGLANS (*Walnut*)—		
REGIA LACINIATA, standards	5 0	7 6
Leaves beautifully cut, habit elegant. Fine lawn tree.		
KERRYA (*Corchorus*)		
JAPONICA per doz.	6 0	9 0
VARIEGATA ,,	6 0	12 0
KOELREUTERIA—		
PANICULATA	1 0	1 6
LEYCESTERIA—		
FORMOSA per doz.	9 0	12 0
LIQUIDAMBER—		
STYRACIFLUA per doz.	6 0	12 0
LIRIODENDRON—		
TULIPIFERUM (*Tulip Tree*)		
9 to 18in. per doz.	4 0	6 0
3 to 4ft. ,,	9 0	
larger	1 0	3 6
FOL AUREA MACULATA	5 0	7 6
VARIEGATA	5 0	7 6
MAGNOLIA—		
ACUMINATA	1 6	2 6
ALEXANDRIA	2 6	3 6
Campbelli	21 0	105 0
FRAGRANTISSIMA	5 0	7 6
GRANDIFLORA	3 6	10 6
PURPUREA	1 6	2 6
LENNE	5 0	7 6
TRIPETALA	3 6	
PHILADELPHUS—		
CORONARIUS (*mock orange*), per doz.	4 0	6 0
aurea variegata	5 0	
FLORE PLENO per doz.	4 0	6 0
GRANDIFLORUS ,,	4 0	6 0
SPECIOSUS ,,	6 0	9 0
PLATANUS (*Plane*)—		
ACERIFOLIA PALMATA,		
4 to 6ft.	1 0	1 6
6 to 8ft.	1 6	2 6
HISPANICA INTEGRIFOLIA	5 0	
OCCIDENTALIS, 6 to 7ft.	1 6	
per doz.	15 0	
larger	2 6	10 6
FOL. AUREO VARIEGATIS	5 0	
ORIENTALIS	1 6	5 0

CUPRESSUS LAWSONIANA ELEGANTISSIMA.

THE finest Golden Conifer in existence. Not only the foliage, but the stem is a most brilliant yellow, and unlike most golden foliaged plants, it is the brightest in the winter.

It is as great an improvement on C. Lawsoniana lutea (or aurea), as that plant is on any other Golden Conifer.

It is a free grower, and as we have thoroughly tested its capabilities of enduring sun heat and frost, we can with the greatest confidence recommend it as one of the greatest acquisitions introduced for many years.

It will be sent out in August, 1875.

Price—1st Size	42s. 0d.	each.
2nd ,,	31s. 6d.	,,

Or 5 Plants for 126s.

RETINOSPORA TETRAGONA AUREA.

This lovely little plant, which is perfectly new and distinct, is one of the prettiest, if not the prettiest of all the Retinosporas.

It is of slow and compact growth, and forms a dense and perfectly conical shrub. As the name implies, the leaves are arranged tetragonally in four rows on the branchlets.

In colour it is a deep green, changing to bright golden in spring, which hue it retains until late in the autumn.

As a miniature lawn tree, or for evergreen bedding purposes, it will be most invaluable.

It will be sent out in autumn, 1876.

Price—1st Size	42s. 0d.	each.
2nd ,,	31s. 6d.	,,

Or 5 plants for 126s.

POPULUS (*Poplar*)—

	Each. s. d.	s. d.
ANGULATA	1 6 ...	3 6
ARGENTEA, 4 to 5ft. per doz.	4 0 ...	6 0
6 to 8ft. ,,	9 0	
CORDATA	2 6	
GRANDIDENTATA PENDULA ...	2 6 ...	3 6
GRÆCA	2 6 ...	3 6
PARASOL DE ST. JULIAN ...	2 6 ...	3 6
TREMULA PENDULA	2 6 ...	3 6

For other varieties, see forest trees.

PRUNUS (*The Plum*)—

	s. d.	s. d.
ALBA PLENA	1 6 ...	2 6
ROSEA ,,	2 6	
SINENSIS	1 6 ...	2 6
TRILOBATA	1 0 ...	1 6

PTEROCARIA—

	s. d.	s. d.
CAUCASICA	1 0 ...	1 6

PYRUS (*Pear*)—

	s. d.	s. d.
ACERIFOLIA	1 0 ...	1 6
AMERICANA	1 0 ...	1 6
ARIA NIVEA	1 0 ...	1 6
AUCUPARIA FASTIGIATA	1 0 ...	1 6
BOLLWYLLERIANA	1 0 ...	1 6
FLORIBUNDA, 5ft. standards	1 0 ...	1 6
INTERMEDIA	1 0 ...	1 6
JAPONICA ...per doz.	12 0	
LANUGINOSA	1 0 ...	1 6
LATIFOLIA	1 0 ...	1 6
MALUS FLORIBUNDA	1 0 ...	3 6
PINNATIFIDA	1 0 ...	1 6
THEOPHRASTII	1 0 ...	1 6
UNDULATA	1 0 ...	1 6
VESTITA	1 0 ...	1 6

QUERCUS (*Oak*)—

	s. d.	s. d.
ÆGILOPS, 2 to 3ft.	2 0 ...	3 0
3 to 4ft	3 6 ...	5 0
*alba	2 6 ...	7 6
VERA	2 6 ...	7 6
DE ROSSEAU	3 6 ...	5 0
*AMERICANA LACINIATA	2 6 ...	5 0
ASPLENIIFOLIA	2 6 ...	7 6
AUREA VIRIDIS	2 6 ...	7 6
AUSTRIACA (see Evergreens, page 19).		
BALLOTA	1 6 ...	2 6
BANISTERI		
CASTANÆFOLIA VERA	2 6 ...	5 0
CERRIS FOL. ARGENTEA VARIEGATA	2 6 ...	5 0
AUREA	3 6 ...	5 0
DENTATA	2 6 ...	5 0
PENDULA	5 0	

QUERCUS (*Oak*)—

	Each. s. d.	s. d.
*COCCINEA,		
12in. to 2ft. ...per doz.	4 0	
per 100	25 0	
2 to 3ft. ...per doz.	9 0 ...	12 0
4 to 6ft.	1 6 ...	2 6
COMPTONIÆFOLIA	3 6 ...	5 0
concordia	1 6 ...	2 6
half standards	2 6 ...	3 6
standards	5 0 ...	10 6

A new variety, with bright golden leaves, which retain their colour until the fall of the leaf; it is very striking, and cannot be too highly recommended.

	s. d.	s. d.
CONFERTA	2 6 ...	5 0
Daimyo	5 0	
FASTIGIATA	1 0 ...	1 6
VIRIDIS	1 6 ...	2 6
*FALCATA	3 6 ...	5 0
FILICIFOLIA	2 6 ...	5 0
FORDII (see Evergreens, page 19).		
FULHAMENSIS (see Evergreens, page 19).		
FULHAMENSIS LATIFOLIA	5 0	
HETEROPHYLLA	2 6 ...	7 6
DISSECTA	2 6 ...	7 6
ILEX LATIFOLIA (see Evergreen Trees).		
imbricaria (*platanoids bicolor*)	2 6 ...	7 6
LOUETTI	2 6 ...	5 0
LEUCOCARPA	5 0	
LUCOMBEANA	2 6 ...	3 6
MACRANTHERA	2 6 ...	5 0
MACROCARPA	3 6 ...	7 6
(Michauxi)	3 6 ...	7 6
MACROPHYLLA	3 6 ...	5 0
var Albertsi ...	15 0 ...	21 0

This oak has the largest leaves of any. We have leaves of last season's growth 14 inches by 8 inches.

	s. d.	s. d.
MONGOLICA	5 0	
MONTICOLA	2 6 ...	3 6
*nigra	2 6 ...	5 0
NIGRICANS	5 0	
nobilis	21 0	
OLIVÆFORMIS	5 0 ...	7 6
HAMPTERI	5 0 ...	7 6
*PALUSTRIS	1 0 ...	5 0
PANNONICA	1 6 ...	7 6
PANNOSA	5 0	
PECTINATA	1 6 ...	7 6
PEDUNCULATA ALBA MACULATA	2 6 ...	7 6
ALBA MARMORATA	2 6 ...	7 6
ATROPURPUREA	2 6 ...	7 6

QUERCUS (*Oak.*)

	Each.	
	s. d.	s. d.
PEDUNCULATA CUCCULATA	2 6	5 0
FOL. ARGENTEO MARGINATIS	2 6	7 6
pictis	7 6	10 6

The second shoot of this variety is quite white.

FOL. ARGENTEA MARGINATA VARIEGATA NOVA	2 6	7 6
PHELLOS	3 6	
PRINOS	1 6	2 6
pseudo Ægilops pendula	5 0	
PUBESCENS	5 0	
pyrenaica camata pendula	7 6	
RUBRA, 2 to 3ft. per doz.	12 0	
4 to 5ft.	1 6	2 6
12ft.	5 0	7 6
MACROPHYLLA	5 0	
RUBRINERVA	5 0	
RUBICUNDA	5 0	
SIEBOLDII	3 6	5 0
SINENSIS	42 0	
SUBER	1 6	2 6
tauzin pendula	5 0	
THOMASI	5 0	
*TINCTORIA	1 6	3 6
TOMENTOSA	5 0	7 6
TURNERI	3 6	
ZAN (see Evergreens, page 19)		

The leaves of those marked * change to the most brilliant and varied hues in the autumn.

RHODODENDRON (*see American Plants*).

RHUS (*Sumach*)—

COPALLINUM	2 6	
COTINUS, 18in. to 2ft. per doz.	9 0	
3ft. to 3ft. 6in.	1 0	1 6
ELEGANS	1 0	1 6
GLABRA per doz.	9 0	18 0
LACINIATA	1 0	1 6
larger	2 6	5 0

A magnificent variety, which has its leaves so deeply and elegantly laciniated that it resembles a tree fern; it turns to a brilliant scarlet in autumn.

TYPHINA (*stag's horn*)	1 0	1 6

RIBES (*Flowering Currant*)—

ALBIDUM per doz.	6 0	
ATROPURPUREUM ,,	4 0	6 0
SANGUINEUM ,,	6 0	
FLORE PLENO ,,	6 0	

ROBINA (*Acacia*)—

	Each.	
	s. d.	s. d.
HISPIDA per doz.	12 0	15 0
of sorts	1 6	3 6
inermis nova	7 6	
PSEUDO-ACACIA SORTS	1 6	3 6
angustifolia elegans		
INERMIS	2 6	3 6
coluteoides		

SALISBURIA—

ADIANTIFOLIA per doz.	9 0	12 0

SALIX (*Willow*)—

ANNULARIS	1 6	2 6
BABYLONICA (*Weeping Willow*),		
4 to 5ft. per doz.	6 0	9 0
mascula	5 0	
CAPREA PENDULA (*Kilmarnock Weeping Willow*),		
standards	2 6	
with very large heads	3 6	5 0
TRICOLOR	1 0	
PENDULA NOVA, Fox's standards	2 6	3 6
CŒRULEA (*Blue Willow*), per doz.	6 0	
LAURIFOLIA ,,	6 0	
REGALIS ,,	5 0	

Beautiful silvery foliage.

PURPUREA PENDULA (*American Weeping Willow*), standards	1 6	2 6
VITELLINA (*Golden Willow*) per doz.	6 0	

SAMBUCUS (*The Elder*)—

NIGRA per doz.	4 0	
aurea	1 6	2 6

Bright golden foliage; a most effective plant in landscape gardening.

NIGRA FOL. ALBO PUNCTATIS	2 6	
LACINIATA per doz.	9 0	
VARIEGATA ,,	6 0	
PYRAMIDALIS	1 0	1 6
RACEMOSA (*scarlet berried*), per doz.	6 0	9 0

SANTOLINA—

CHAMÆCYPARISSUS per doz.	6 0	9 0

SOPHORA—

JAPONICA PENDULA	2 6	

SPIREA—

ARIÆFOLIA, 3 to 4ft. per doz.	6 0	
4 to 5ft. ,,	9 0	
CALLOSA, very strong ,,	3 0	6 0
ALBA, 9in. to 12in. ,,	6 0	
15in., bushy ,,	12 0	

Each.

SPIREA—

	s. d.	s. d
DOUGLASII	4 0 ...	6 0
(exocordia) grandiflora	10 6	
JAPONICA (HOTEIA), strong crowns per doz.	6 0 ...	9 0
Lindleyana	5 0	
OPULIFOLIA LUTEA	1 0	
per doz.	9 0	
Golden foliage.		
PALMATA	2 6 ...	3 6
THUNBERGIA per doz.	6 0	
VENUSTA	1 0 ...	1 6
ULMARIA VARIEGATA	1 0	

SYMPHORICARPUS (*The Snowberry*)—

RACEMOSUS per doz.	3 0	
VARIEGATUS ,,	4 0 ...	6 0

SYRINGA (*Lilac*)—

in sorts per doz.	6 0 ...	12 0
Persian standards	2 0	

TILIA—

AMERICANA per doz.	9 0 ..	12 0
GLABRA, 3 to 4ft.	1 8	
ARGENTEA	1 6 ...	5 0
FILICIFOLIA NOVA	1 6 ...	2 6
PENDULA STANDARDS	3 6 ...	5 0
FOL. VARIEGATIS	2 6 ...	5 0
dasystyla	1 6 ...	5 0
This variety retains its foliage for some weeks longer in the autumn than the common; its leaves are also a much brighter green.		
HETEROPHYLLA	1 6 ...	5 0
LACINIATA	1 6 ...	5 0
MACROPHYLLA	2 0	
MISSISSIPIENSIS, 5 to 6ft.	1 6 ...	2 6
PLATYPHYLLA,		
2 to 3ft. per 100	20 0	
4 to 5ft. ,,	40 0	
7 to 8ft.	1 0 ...	2 0
8 to 10ft.	3 6 ...	5 0
AUREA (yellow twigged), per doz.	9 0 ...	18 0
RUBRA (red twigged), per doz.	9 0 ...	18 0
SPECIOSA	2 6	
ULMIFOLIA FOL. VARIEGATA	2 6	

ULMUS—

AMERICANA	1 0 ...	1 6
PENDULA standards	3 6 ...	5 0
FOL. AUREO VARIEGATIS	1 6 ...	2 6
ANTARCTICA	1 0 ...	1 6
CAMPESTRIS BERARDI	1 6	
standards	2 6	
Very neat cut-leaved variety, semi-pendulous habit.		
aurea Rosseelsi, dwarfs	1 0 ...	1 6
standards	2 0 ...	3 0
A gorgeous lawn tree; retains its deep golden hue till autumn.		

Each.

ULMUS—

	s. d	s. d.
BETULÆFOLIA, 2 to 3ft.	1 0	
GORIENSIS NOVA	2 0	
INCISA	1 6	
LATIFOLIA ALBA MACULATA	1 6	
VARIEGATA	1 6	
6 to 8ft.	2 6 ...	3 6
MONUMENTALIS, 4 to 6ft.	1 6 ...	2 6
VIMINALIS PENDULA		
standards	2 6	
SUPERBA VARIEGATA	1 0	
standards	2 6	
Chinensis, 3ft.	3 0	
Nearly evergreen.		
GLABRA	1 0 ...	1 6
SCAMPSTONENSIS (*Scampston Weeping*), on stems, 8 to 10ft., very fine	3 6	
KAKI (*Planera*), from Japan	1 6 ...	2 6
MICROPHYLLA PENDULA standard	2 6	
MONTANA ASPLENIIFOLIA, 2 to 3ft.	1 6	
AUREA VARIEGATA	1 6	
CANADENSIS (*Giant or Huntingdon*), 5 to 6ft., per doz.	6 0 ...	9 0
CRISPA	1 6	
DAMPIERI, 4 to 6ft.	1 6 ...	2 0
EMARGINATA, 6 to 7ft.	1 0 ...	1 6
FASTIGIATA (*Exeter*) standards, 8 to 10ft.	1 0 ...	1 6
LATIFOLIA ALBA MACULATA	1 6	
PENDULA (*Camperdown Weeping*) standards	2 6 ...	5 0
extra fine	7 6	
PLUMOSA, 6 to 8ft.	1 6 ...	2 6
9 to 11ft.	2 6 ...	3 6
AUREA	2 7 ...	3 6
PURPUREA, 4 to 6ft.	1 0 ...	1 6
PYRAMIDALIS VARIEGATA	1 6	
SIBERICA, 4 to 6ft. per doz.	9 0	
6 to 8ft. ,,	18 0	
SUBEROSA, 4 to 6ft.	1 0	
VARIEGATA	1 6 ...	2 6
VERSCHAFFELTI	7 6	

VIBURNUM—

LANTANA per doz.	6 0 ...	9 0
LUSITANICUM LATIFOLIUM	1 0	
OPULUS (GUELDER ROSE,) per doz.	6 0 ...	12 0
NANA ,,	6 0	
ROSEA	7 6	

VIRGILIA—

LUTEA, 2 to 3 ft.	1 6	
7 to 8ft.	2 6	

WEIGELIA—

AMABILIS per doz.	3 0 ...	4 0
HORTENSIS NIVEA, 2 to 3ft.	1 0	
ROSEA, 2 to 3ft. per doz.	6 0 ...	9 0
VARIEGATA, 12 to 18in. per doz.	9 0	

ORNAMENTAL AND FLOWERING TREES AND SHRUBS.

ARBUTUS—

	Each. s. d.	s. d.
Andracne	1 6 ...	2 6
Croomii	1 6 ...	2 6
Millerii	1 6 ...	2 6
Phontinifolia	1 6 ...	2 6
procera	1 6 ...	2 6
unedo, 9 to 12in. ...per doz.	6 0 ...	9 0
12 to 18in. „	9 0 ...	12 0
2ft. 6in. to 3ft. 6in.	2 6 ...	3 6

AUCUBA—

	s. d.	s. d.
Japonica, 9 to 12in. per doz.	6 0	
15 to 18in. „	12 0	
larger	1 6 ...	5 0

In order to facilitate the selection of the various kinds, we divide them into two classes, the "male" and "female" varieties; the green varieties in each being marked *, all the others are variegated, some with a fine blotch in the centre of the leaf, as in *A. bicolor*, whilst in others the variegation is spotted, or irregularly blotched. They are all beautiful, and their value as good hardy ornamental plants cannot be overrated.

MALE VARIETIES.

	s. d.	s. d.
bicolor	1 6 ...	7 6
longifolia*	1 6 ...	5 0
maculata	1 6 ...	5 0
marmorata	1 6 ...	5 0
medio argentea	1 6 ...	5 0
ovata*	1 6 ...	5 0
viridis, or vera*	1 6 ...	5 0

FEMALE VARIETIES.

	s. d.	s. d.
angustifolia*	1 0 ...	3 6
aurea	5 0	
limbata or picta	1 6 ...	5 0
longifolia*	1 6 ...	5 0
dentata*	3 6 ...	5 0
variegata	2 6 ...	5 0
macrophylla*	1 6 ...	5 0
maculata*	1 6 ...	5 0
ovata*	1 6 ...	5 0
viridis, or vera	1 6 ...	5 0
seedlings from the above varieties ...per doz.	6 0 ...	18 0

BAMBUSA—

	s. d.	s. d.
Fortuneii variegata, strong per doz.	6 0 ...	9 0
Metake „	18 0	
viridis striata	2 6	

BERBERIS—

	Each. s. d.	s. d.
concinna		
Darwini, 12 to 18in., transplanted ...per 100	15 0	
18in. to 2ft. „	20 0	
2ft. to 2ft. 6in. ...per doz.	4 0	
per 100	25 0	
3 to 4ft. ...per doz.	6 0 ...	9 0
dulcis ...per 100	15 0 ...	20 0
empetrifolia ...per doz.	6 0 ...	9 0
intermedia and Japonica (see Mahonia).		
Newberti ...per doz.	18 0	
stenophylla, 18in. to 2ft. „	6 0 ...	9 0
larger „	9 0 ...	12 0
Wallichii, 12 to 15in., bushy per doz. 4/-...per 100	25 0	
18in. to 2ft. ...per doz.	9 0	
2ft. to 2ft. 6in.	1 6 ...	2 6
Vulgaris fol. aurea variegata	3 6	

BROOM (see *Spartium*).

BUXUS (*Box*)—

	s. d.	s. d.
arborescens, 18in. to 2ft. per doz. 3/- per 100	15 0	
2 to 2ft. 6in. „ 5/- „	30 0	
3 to 4ft. ...per doz.	9 0 ...	12 0
larger	1 6 ...	5 0
pendula variegata per doz.	9 0 ...	18 0
argentea „	9 0 ...	12 0
aurea	1 0 ...	1 6
dwarf, for edging, 4d. per yd.		
Hardwick seedling...per doz.	6 0 ...	9 0
Japonica aurea	1 0 ...	5 0
latifolia nova	3 0	
Nepaulensis	1 0	
obcordata	1 6	
pyramidalis ...per doz.	6 0 ...	9 0
rotundifolia „	9 0 ...	12 0

CASTANEA—

	s. d.	s. d.
Chinensis	1 6 ...	2 6
chrysophylla	15 0 ...	21 0

An evergreen Chestnut, very beautiful and scarce, with very sweet-scented flowers; the under-surface of the leaves is a golden yellow.

	Each.	
	s. d.	s. d.
CERASUS—		
lauro cerasus (*Common Laurel*),		
1 to 2ft. per 100 15/- per dz.	3 0	
2 to 3ft. „ 25/- „	5 0	
larger	6 0	12 0
Alexandrina	1 0	
caucasicum, 4ft. to 4ft. 6in. per doz.	12 0	
colchicum, 2 to 3ft. „	5 0	
3 to 4ft. „	8 0	
falcata	1 6	
latifolia	1 0	1 6
rotundifolia per doz.	9 0	
lusitanica (*Portugal Laurel*),		
9 to 15in. per doz. 3/- per 100	20 0	
18in. „ 4/- „	30 0	
2ft. to 2ft. 6in. „ 8/- „	50 0	
larger	1 0	5 0
Azorica	1 6	2 6
myrtifolia, 18in. to 2ft. per doz.	18 0	
3 to 4ft.	3 6	
CHAMÆROPS—		
Fortuneii (*Chusan Palm*),		
strong, in 48/- pots	1 6	2 6
specimens	7 6	10 6
CISTUS—		
ladaniferus (*Gum Cistus*), per doz.	6 0	
extra strong	1 0	1 6
COLLETIA—		
Bictonensis	1 6	
horrida	1 6	
COTONEASTER—		
affinis per doz.	9 0	
frigida „	6 0	
Hookeriana	1 0	3 6
microphylla, strong, 18in. to 2ft. per doz.	4 0	6 0
Simmondsi, 12in. to 2ft. per 1000 30/- ...per 100	4 0	
2 to 3ft. „	12 6	
3 to 4ft. „	17 6	
thymifolia per doz.	6 0	9 0
CRATÆGUS—		
pyracantha (*climber*), per dz.	9 0	12 0
DAPHNE—		
cneorum	1 0	1 6
variegatum	2 6	
collina	1 6	
variegata aurea	5 0	
elegantissima	5 0	
laureola per doz.	9 0	12 0

	Each.	
	s. d.	s. d.
DESFONTANIA—		
spinosa	2 6	5 0
ELÆGNUS (*Climber*)—		
angustifolia	1 6	
argentea per doz.	12 0	
Japonica variegata	1 6	10 6
marginata aurea	1 6	10 6
reflexus	1 6	
variegata	1 6	
ESCALLONIA (*Climber*)—		
Ingramii	1 0	
macrantha	1 0	
potrocladon	1 0	
rubra	1 0	
EUGENIA—		
ugni	1 0	
EUONYMUS—		
Japonica aurea variegata, 4 to 6in. per doz.	4 0	
9 to 12in. „	9 0	
latifolia alba var. 6 to 9in. per doz.	9 0	
12 to 18in.	1 0	1 6
ovata aureo marginata, 4 to 6in. per doz.	6 0	
6 to 9 in. „	9 0	
variegata, 4 to 6in per dz.	4 0	
9 to 12 in. „	9 0	
pulchella, 4 to 6in. ... „	4 0	
6 to 10in. „	8 0	
radicans, 4 to 6in. per doz.	4 0	
6 to 10in. „	9 0	
sulphurea		
tricolor, 4 to 6in. ... „	6 0	
6 to 10in. „	9 0	
nana rosemarinifolia	2 6	
EURYA—		
latifolia variegata, 18in. to 2ft.	5 0	7 6
3 to 4ft.	15 0	25 0
EURYBIA	1 0	
GARRYA—		
elliptica	1 0	1 6
GARDENIA—		
radicans variegata	2 6	3 6
GRISELINA—		
littoralis	1 0	

ILEX— (*The Holly*)

	Each. s. d.	s. d.
aquifolium (*common green holly*)		
12 to 18in. per 100	25 0	30 0
18 to 2ft. 6in. per doz. 8/- per 100	50 0	
larger	1 6	10 6
argentea, 9 to 12in.... per doz	12 0	
12 to 18in. „	18 0	
larger	2 6	63 0
elegantissima	2 6	10 6
Handsworthensis	2 6	7 6
latifolia (*silver Queen*)	2 6	5 0
aurantiaca (*bronze or moonlight*)	1 0	5 0
aurea marginata latifolia, (*best gold striped or Queen Holly*).		
12 to 18in.	2 0	3 0
18in. to 2ft.	3 6	5 0
2ft. to 2ft. 6in.	5 0	10 6
3ft. to 4ft.	15 0	63 0
5ft. 6in. to 7ft.	84 0	210 0
Perfect pyramidal specimens.		

We hold a large stock of fine specimens of this grand plant; they are all well-grown compact plants. Where winter effect is required they stand unrivalled, and are in fact, indispensable to lighten up the landscape where darker evergreens are used.

	s. d.	s. d.
aurea marginata pendula (*Weeping Golden Queen*), standards	21 0	42 0
vestita	5 0	7 6
Balearica, 18in. to 2ft. per dz.	21 0	
ciliatum major	5 0	7 6
minor	1 6	2 6
cornuta	2 6	5 0
crenata (*Fortuneii*), 9 to 12in. per doz.	12 0	
12 to 18in.	1 6	2 6
mycrophylla, 9 to 12in. per doz.	12 0	
12 to 18in.	1 6	2 6
variegata, 9 to 12in.	1 6	2 6
larger	10 6	21 0

A small narrow-leaved glossy Holly, suitable for making hedges or training in any shape; bears clipping better than any other plant, so that in a few years it becomes almost impenetrable.

	s. d.	s. d.
Cunninghami	2 6	5 0
Dahoon or Scotica	1 6	5 0
Doningtoniensis,		
12 to 18in. per doz.	18 0	
larger	2 6	10 6
aurea		
ferox (*hedgehog*)	1 6	5 0
variegata	2 6	5 0
Foxii	1 6	7 6

ILEX— (*The Holly*)

	Each. s. d.	s. d.
fructo luteo, 12in. to 2ft.	1 6	2 6
4ft. to 5ft.	5 0	7 6
variegata, 12 to 18in.	2 6	3 6
larger	5 0	42 0
Handsworthensis	2 6	3 6
Hodginsi	2 6	21 0
latispina	1 6	10 6
latifolia argenteo marginata	3 6	5
laurifolia, 18in. to 2ft. per dz.	21 0	
2ft. to 3ft.	2 6	3 0
larger	3 6	21 0
nova	21 0	
Lawsoniana	5 0	7 6
"Madame Brabant"	5 0	
maderiensis, 18in. to 12ft.	1 6	2 6
larger	5 0	7 6
atrovirens	2 6	5 0
medio picta (*Milkmaid Holly*)	2 6	7 6
aurea	2 6	10 6
alba	2 6	10 6
monstrosa	7 6	10 6
myrtifolia	1 6	5 0
aurea maculata	42 0	
marginata	21 0	
nana aurea (*Waterers Holly*)	2 6	42 0
nobilis, 18 to 2ft.	1 6	2 6
larger	3 6	21 0

This is the holly known under the name of Hodginsi in many parts of England; it has a very large dark leaf (nearly black), and as it does not appear to be affected by smoke, it is invaluable for planting in the neighbourhood of towns.

	s. d.	s. d.
oblata	7 6	
opaca, 4ft. to 5ft	5 0	7 6
ovata, 18in. to 2ft.	2 6	3 6
larger	7 6	21 0
pendula standards	10 6	
argentea variegata standards (*Perry's Weeping*)		
aurea marginata	21 0	31 6
picta (*golden blotched*)	2 6	10 6
serratifolia aurea maculata	42 0	
alba marginata	21 0	
Sheppardi, 18in. to 2ft	1 6	2 6
larger	3 6	21 0
Smithiana	1 6	7 6
Webbiana	7 6	
Whittingtonensis	1 6	7 6

LAURUS—

	s. d.	s. d.
nobilis (*Sweet Bay*)	1 0	2 6
standards with heads per pair	42 0	420 0

LIGUSTRUM— (*Privet*)

	s. d.	s. d.
chinensis per doz.	6 0	12 0
coriaceum	1 0	2 6
standards	3 6	5 0

	Each. s. d.	s. d.
LIGUSTRUM— (*Privet.*)		
glabrum fol. aureo variegata	1 0	... 1 6
Italicum (*evergreen privet*)		
18in. to 2ft. ....per 100	3 6	
per 1000	30 0	
2ft. to 3ft.............per 100	4 6	
per 100	35 0	
Japonica (*true*), 12 to 18in. per doz.	15 0	
standard	2 6	... 3 6
aurea variegatum	1 6	... 2 6
lucidum	1 6	... 2 6
tricolor		
ovalifolium, 18in. to 12ft., per 100	7 6	
2ft. to 3ft.	8 6	
variegatum	1 6	... 2 6
vulgaris fol. aurea elegans	5 0	
MAGNOLI —		
Exoniensis	2 6	... 7 6
MAHONIA—		
aquifolia, 2-year seedlings, per 1000	9 6	
transplanted, 9 to 15in. per 100	7 6	
glumacea, 6 to 12in.	1 0	
intermedia (*Belia*), 6 to 9in. per doz. 3/-, per 100	21 0	
9 to 12in. per doz. 5/- ,,	30 0	
12 to 18in. ,, 9/- ,,	60 0	
18in. to 2ft., very bushy ...	1 6	... 2 6
3ft. 6in. to 4ft., very bushy	3 6	... 5 0
Japonica, 6 to 9in. per dz. 3/- per 100	21 0	
9 to 12in. per doz. 5/- ,,	30 0	
12 to 18in. ,, 9/- ,,	60 0	
18in. to 2ft., very bushy ...	1 6	... 2 6
3ft. 6in. to 4ft., very bushy	3 6	... 5 0
Murrayana	2 6	.. 3 6
Nepalensis	2 6	... 3 6
pallida	2 6	
OSMANTHUS—		
illicifolia	1 0	... 3 6
imported specimens	31 6	
heterophylla	1 6	... 5 0
rotundifolia	1 0	... 7 6
variegata aurea	1 0	... 5 0
larger	7 6	... 42 0
diversifolia	1 0	... 5 0
larger	7 6	... 31 6
latifolia	1 0	... 5 0
larger	7 6	... 63 0
nana	1 0	... 2 6
larger	5 0	... 31 6

	Each. s. d.	s. d.
PHILLYREA—		
angustifolia, 12 to 18in. per doz.	9 0	
latifolia, 12 to 18in. ,,	9 0	
QUERCUS (*Evergreen Oak*)—		
Ilex latifolia, 12 to 18 in. per 100 50/-......per doz.	9 0	
18in. to 2ft.......... ,,	15 0	
larger	2 6	... 5 0
Austriaca sempervirens, 12 to 18in. ....per doz.	18 0	
2 to 3ft.	2 6	... 3 6
Banisteri		
Fordii, 12 to 15in.	1 6	
18in. to 2ft.	2 6	
Fulhamensis	3 6	... 5 0
latifolia	5 0	
zan	5 0	
RAPHIOLEPIS (*Photina*)—		
ovata	1 6	... 7 6
RHAMNUS (*Buckthorn*)—		
alaternus ....per doz.	6 0	
catharticus, 2 to 3ft. ,,	6 0	
frangula, 4 to 5ft. ,,	6 0	
Furestina		
SKIMMIA—		
Japonica...............per doz.	6	... 12 00
oblata	1 0	... 5 0
oblongata	5 0	
SPARTIUM—		
Junceum (*Yellow Spanish*, per doz.	4 0	
multiflora (*White Portugal*), per doz.	4 0	... 6 0
(*Yellow Portugal*) ,,	12 0	
scoparium	4 0	... 6 0
TAMARIX—		
Africana...............per doz.	6 0	
Gallica .... ,,	6 0	
Germanica .... ,,	6 0	
indica .... ,,	6 0	
ULEX (*Furze or Whin*)—		
Europœa flore pleno ,,	4 0	
VIBURNUM—		
Sielboldi, 12 to 18in.	2 6	

A handsome evergreen shrub, with bright glossy green leaves.

VIBURNUM—	Each. s. d.	s. d.
tinus (*Laurestinus*),		
9 to 12in. per dz. 5/- per 100	30 0	
12 to 15in. „ 6/- „	35 0	
18in. to 2ft. „ 10/- „	60 0	
2 to 3ft.	1 0	1 6
3 to 4ft.	2 6	3 6
opulus rosea	7 6	

YUCCA—	Each. s. d.	s. d.
aloefolia variegata	10 6	63 0
filamentosa	1 6	2 6
alba spica	7 6	
variegata	7 6	63 0
gloriosa	3 6	21 0
glauca	3 6	21 0
recurva	1 6	2 6

AMERICAN PLANTS.

RHODODENDRONS (HARDY VARIETIES).

The following prices represent plants from 1 foot to two feet high, larger plants may be had at advanced prices.

☞ We have a fine stock of 1 year and 2 years' grafts, which we can supply at £7 10s. and £10 per 100.

	Each.—s. d.
Aclandianum, delicate blush	3 6
Adonis	3 6
Alarm, deep crimson, white centre	3 6
Alaric, dark purple, shaded crimson 2/6 to	3 6
Alexandrina	3 6
Arabella, very large, white, yellow spots	5 0
Archimedes, rosy crimson	3 6
Atrosanguineum, deep crimson	3 6
Azureum, distinct and beautiful	2 6
Barclayanum, clear rosy crimson	3 6
Beranger, white	3 6
Bertha, blush	5 0
Blandyanum, deep crimson	3 6
Blatteum, claret crimson	3 6
Bouquet de Flore, light rose	3 6
Brayanum, bright purplish crimson	3 6
Broughtoni, fine bright rose	3 6
Briareus, rose, magnificent truss	5 0
Brutus, large, pale rose	2 6
Bylsianum, blush, rose edge	3 6
Captivation, fine rosy crimson	2 6
Catawbiense, rosy lilac	
Chancellor, dark purplish lilac	2 6
Cinnamomum, Cunninghami	2 6
Columbus, pale flesh	2 6
Cœlestinum, blush	3 6
Comtesse de Morello, clear rose	5 0
Concessum, deep rose	3 6
Currieanum, fine dark purple	2 6
Czar	2 6
Duc de Brabant, yellowish white	2 6
Duke of Malakoff, blush	3 6
Ensign, pale blush	3 6
Erectum, rosy crimson	3 6
Etendard de Flandre, blush rose, with dark eye	3 6
Etna	5 0
Etoile de Jardin	5 0
Everestianum, fringed, violet colour	2 6
Exquisite, pure white, large blotch	3 6

	Each.—s. d.
Fastuosum flore pleno, rosy lilac	3 6
Ferrugineum	
Fireball, deep lake	5 0
Fleur de Marie, bright lake, white centre	3 6
Floribundum, deep lake, compact truss	2 6
Formosum, pure white	3 6
Gandavense, good rose	3 6
Generalissimo, bright lake	3 6
General Cabrera, crimson spots	3 6
General Wilson, bright lake	5 0
Gigantea, bright rose	3 6
Gloire, white, reddish brown spots	5 0
Grisewoodianum, white, purplish crimson spots	5 0
Harlequin, violet purple, white centre	2 6
Hendersonii, dark purplish claret	2 6
Henry Drummond, crimson scarlet	3 6
Herschell, rose	3 6
Hirsutum, dwarf, red	
Hogarth, rosy scarlet	2 6
Humboldti, deep rose	3 6
Iago, rosy crimsom	3 6
Incomparable, bright red	3 6
Ingramii, pale blush	3 6
Invincible, lemon-coloured spots	5 0
Imperatrice, bright cerise rose	5 0
Isabel, light rose, pale centre	10 6
Jessica, dark eye, lavender ground	5 0
John Waterer, a most intense crimson	3 6
Jubar, light rosy crimson	3 6
Lady Eleanor Cathcart, pale rose	3 6
Lady Godiva, fine white	3 6
Leopard, rosy lilac	2 6
Leviathan, white, tinged with violet	3 6
Limbatum, pale blush	3 6
Lord Clyde, dark crimson	3 6
Lord Derby	10 6
Lucidum, purplish lilac	2 6
Lucretia, peach colour	5 0
Maculosissimum, pale rose	3 6

	Each.—s. d.
Maculatum, deep plum colour	3 6
grandiflorum, rich plum colour	3 6
superbum, rosy lilac	2 6
Madame Titiens, fine deep rose	3 6
Madame Miolan Carvalho, fine white	3 6
Madame Wagner, white, broad pink margin	3 6
Magnolifolium superbum, violet purple	3 6
Maid of Honour, clear white	3 6
Marguerite, blush, tinted with puce	3 6
Michael Waterer, brightest scarlet crimson	3/6 to 5 0
standards	7/6 „ 10 6
Minnie, white	3 6
Mirandum, good clear rose	3 6
Moonbeam, pure white	3 6
Mountaineer, very pale blush	3 6
Mount Blanc, pure white	3 6
Mrs. Fitzgerald, rose, spotted	3 6
Mrs. Hemans, nearly white	5 0
Mrs. John Waterer, bright rose colour	3 6
Mrs. Loudon	3 6
Mrs. Standish, pure white	3 6
Myrtifolia	
Neilsonii, beautiful rosy lake	5 0
Ne plus Ultra, fine crimson purple	3 6
Nero, dark rosy purple, richly spotted	3 6
Nobleanum, dark pink	3 6
Oberon, clear pale purple	5 0
Onslowianum, delicate waxen blush	2 6
Othello, crimson, compact truss	3 6
Papilionaceum, blush	5/- to 7 6
Paxtoni, very deep bright rose	3 6
Pictum, pinkish-white, dark eye	3 6
grandiflorum, larger and whiter flower than "Pictum"	3 6
Ponticum	
Purity, white, yellow eye	3 6
Queen of the Fairies	2 6
Queen of Sheba, intense crimson	3 6
Queen Victoria, deep claret purple	5 0
Regalia	3 6
Rifleman, very bright crimson	5 0
Robert Burns, deepest crimson	3 6
Roseum grandiflorum, deep rose	2 6

	Each.—s. d.
Rubianum, bright rose	5 0
Russelleanum, pale crimson	5 0
Schiller, bluish purple	3 6
Sidney Herbert, crimson	3 6
Sir J. Clarke, dark crimson	5 0
Sir Joseph Whitworth, purplish rose	3 6
Sir Walter Scott, pale pink and white	3 6
Star of England, pale pinkish white	5 0
Standish's Perfection, pale peach colour	7 6
Stella, pale rose	3 6
Sultana, very pale blush	3 6
Surprise, light rose, good truss	3 6
Tarpeia, white, brown spots	5 0
The Gäel, pale blush, yellow	5 0
The Sun of Austerlitz	3 6
The Grand Arab	3 6
The Grenadier, clear crimson	5 0
The Queen, finest white	5 0
The Warrior, rosy scarlet	5 0
Titian, bright rosy scarlet	3 6
Vandyke, rosy crimson, late	3 6
Vesuvius, bright glowing crimson	5 0
Weatherproof	3 6
William Downing, rich dark puce	3 6
Young Seidel, pale purple	3 6
Zealander, blush, fine	2 6
Zuleika, delicate blotch	3 6

COMMON KINDS, TO BE PLANTED IN LARGE QUANTITIES.

		s. d.		s. d.
Catawbiense, seedling plants, strong	per 100	30 0	...	50 0
larger	„	75 0	...	100 0
Hybrids, per doz. 6/-	„	45 0		
stronger „ 10/-	„	75 0		
Ferrugineum	per doz.	6 0	...	9 0
very strong	„	12 0	...	18 0
Hirsutum	„	6 0	...	9 0
very strong	„	12 0	...	18 0
Myrtifolia	„	9 0	...	12 0
very strong	„	12 0	...	24 0
Ponticum, good strong plants	per 100	30 0	...	42 0
stronger	„	50 0	...	75 0
extra large	per doz.	12 0	...	42 0

MISCELLANEOUS AMERICAN PLANTS.

		Each. s. d.		s. d.
ANDROMEDA—				
of sorts	per doz.	4 0	...	18 0
AZALEA—				
amœna		1 0	...	1 6
Ghent, best named varieties		2 6	...	3 6
linearis, 12 to 18in. A new hardy Azalea, very distinct.		3 6	...	5 0
obtusa		1 6		
pontica, 9 to 12 in.	per doz.	6 0		
12 to 18in.	„	9 0		
18in. to 2ft.	„	12 0		

		Each. s. d.		s. d.
COMPTONIA—				
asplenifolia		2 6		
ERICA (*The Heath*)—				
best hardy named sorts	per doz.	6 0	...	18 0
GAULTHERIA—				
acuminata	per doz.	9 0	...	12 0
shallon	„	6 0	...	9 0

	Each. s. d.	s. d.
GYNERIUM—		
argenteum	9 0 ...	18 0
carminata	21 0	
tricolor	10 6	
variegata	5 6 ...	3 6
aurea marginata	10 6	
HEATHS (see *Erica*).		
KALMIA—		
glauca per doz.	6 0 ...	9 0
latifolia, 15 to 18in. „	12 0	
2ft. 6in.	3 6	
LEDUM—		
palustre per doz.	6 0 ...	12 0

	Each. s. d.	s. d.
MYRICA (*Candleberry Myrtle*)—		
gale per doz.	6 0 ...	12 0
PERNETTYA—		
floribunda	0 9 ...	1 0
mucronata	0 6 ...	1 0
speciosa	0 9 ...	1 0
PHILESIA—		
buxifolia	2 6 ...	3 6
POLYGONUM—		
Brunonii per doz.	6 0 ...	9 0
vacciniifolium „	6 0 ...	9 0
VACCINIUM—		
corymbosum per doz.	9 0 ...	12 0
vitis idœa	1 0	

FOREST TREES.

Heights and prices of the above will be forwarded on application. We have also a fine stock of Shrubs for Cover Planting.

PLANTING DONE BY CONTRACT.

HERBACEOUS AND ROCK PLANTS, CLIMBERS, &c.

For sorts and prices of the above, of which we have a most extensive collection, see our General Catalogue, page 68.

STOVE AND GREENHOUSE PLANTS.

We have a small but choice collection of the above, prices of which we shall be glad to communicate.

ROSES.

A descriptive Catalogue of the above, of which we hold a large, healthy, and well-grown Stock of all the best varieties, may be had post free on application.

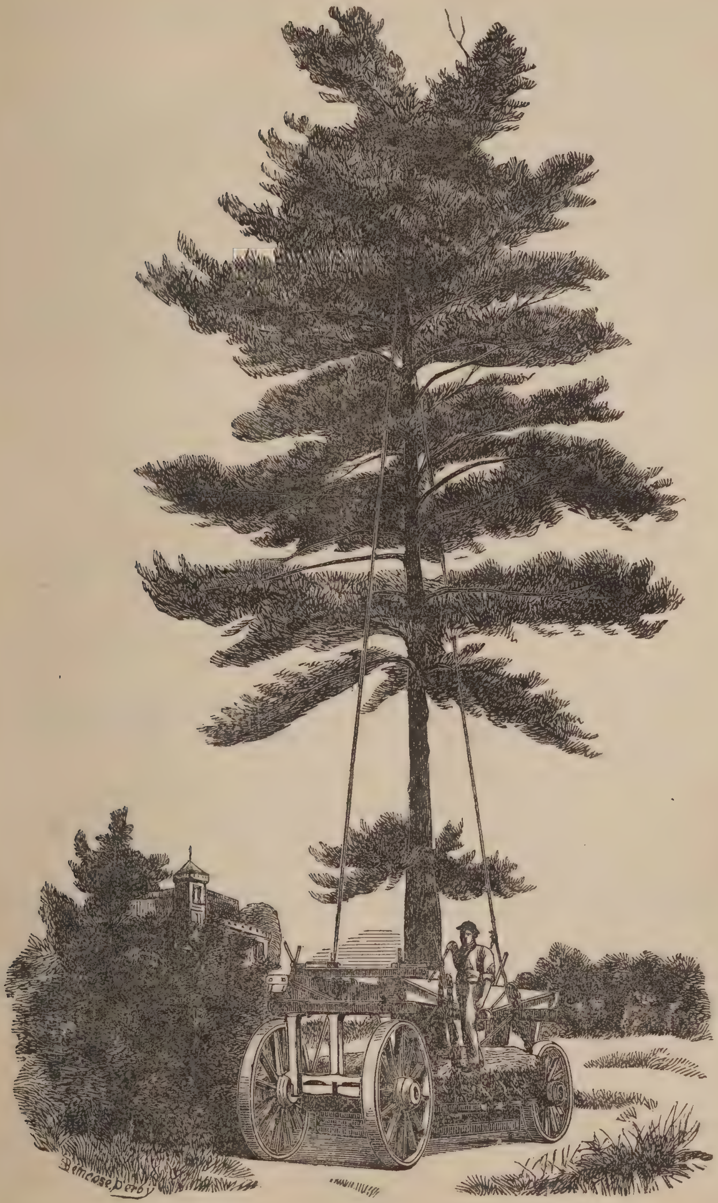
Price—Standards or Half Standards, 15/- to 18/- per doz. Dwarf, 9/- to 12/- per doz. 60/- per 100. Selection left to ourselves.

FRUIT TREES.

For names and descriptions, see General Catalogue, page 84.

	Each. s. d.	s. d.
APPLES, best named sorts—		
Standards	1 0 ...	1 6
Pyramids	1 0 ...	1 6
Dwarfs or Bushes	0 9 ...	1 0
APRICOTS, best named sorts—		
Dwarf, trained	3 6 ...	5 0
Standards	5 0 ...	7 6
ASPARAGUS, strong, per 100	2 6	
per 1000	20 0	
CHERRIES, best named sorts—		
Standards	1 3 ...	1 6
Pyramids...	2 6 ...	3 6
Dwarfs or bushes	1 0 ...	1 3
Dwarf, trained	3 6	
CURRANTS, best sorts— Black, Red, and White, per doz.	2 0 ...	3 0
DAMSONS	1 6	
GOOSEBERRIES, fine sorts, per doz.	2 0 ...	4 0
MEDLARS, WALNUTS, and QUINCES	1 0 ...	1 6
MULBERRIES	7 6	

	Each. s. d.	s. d.
NECTARINES, best named sorts—		
Dwarf, trained	3 6 ...	5 0
Standards	5 0 ...	7 6
NUTS and FILBERTS, per doz. 6/-, 9/-, and	12 0	
PEACHES, best named sorts—		
Dwarf, trained	3 6 ...	5 0
Standards, trained	5 0 ...	7 6
PEARS, best named sorts—		
Standards	1 3 ...	1 6
Pyramids	1 6 ...	5 0
Dwarf or Bushes	1 0 ...	1 3
Dwarf, trained	3 6	
PLUMS, best named sorts—		
Standards	1 3 ...	1 6
Pyramids	2 6 ...	3 6
Dwarfs or Bushes	1 0 ...	1 3
Dwarf, trained	3 6	
RASPBERRIES, fine sorts, per doz.	2 0 ...	4 0
STRAWBERRIES, fine sorts, per doz.	3 6 ...	5 0
VINES, best named sorts	3 6 ...	7 6



W. Barron & Son's Transplanting Machine

W. BARRON & SON'S TRANSPLANTING MACHINES.

These Transplanting Machines have removed both Evergreens and Deciduous Trees over 50 feet high, to considerable distances, with almost invariable success. By the use of these Machines an effect can be produced at once which could not be otherwise accomplished in one or two generations; so that a place is soon made enjoyable to its possessor, and trees of great beauty and value can be removed to more suitable sites, or prevented from being spoiled when planted too near others.

They were invented by William Barron, the first of them being used in February, 1831. In November, 1831, he Transplanted a Cedar of Lebanon, forty-three feet high, and forty-eight feet in diameter of branches; the stem of this Cedar, which at that time was two feet in diameter, is now more than ten feet in circumference. A Tree seventy-two feet high, was moved more than two miles in an upright position. Yews from six to eight hundred years old have been moved with the greatest success. Oaks and Larches from forty to fifty feet high have been moved in the middle of summer without losing a leaf. Large Spruce and Silver Firs on the limestone formation, have made a shoot eighteen inches in length the second year after their removal.

Among others, we have built Machines for

His Grace the Duke of Portland.
His Grace the Duke of Manchester.
The Most Noble the Marquis of Westminster.
The Right Hon. the Earl of Stamford and Warrington.
The Right Honourable Lord Wenlock.
The Royal Botanic Gardens, Kew, &c., &c., &c.
The Corporation of the City of Freiburg.
Grand Duchy of Baden.

TESTIMONIALS.

Tandragee Castle, County Armagh, Ireland,
4th March, 1869.

Gentlemen,

With one of your large machines we have transplanted over 130 trees of 40 years' growth, including Spanish Chestnuts, Limes, Sycamores, and Oaks—but chiefly the latter—with balls varying from three to eight tons, and in every instance with complete success.

I remain your obedient servant,
J. FORDYCE,
Agent to His Grace the Duke of Manchester.

Millichope Park, Church Stretton, Shropshire, March 22, 1869.

My dear Sir,

I have much pleasure in certifying as to the great success of the operations in tree-moving, which were carried on at this place under your directions, between the years 1858 and 1861. During that period there were moved here, on your system, without any regard to time of year, a great number of trees of all sorts and sizes, but mostly Evergreens; a good many of these being Yews of large size and of great age.

From my experience of your system, I have no hesitation in saying that, if the directions given are duly carried out in all respects, complete success may be considered a certainty.

I am, dear Sir, yours very truly,
Wm. Barron, Esq. C. O. CHILDE PEMBERTON.

Thornhill, Cowes, Isle of Wight, June 4, 1869.

Sir,

I have very great pleasure in bearing testimony to the success which has attended the removal of some hundred of large trees upon your system at my place, Lillesden, in Kent, and to the perfect efficiency of your machines, and the intelligence and zeal of the men you send with them. The beauty of my place has been increased, under your aid, in a degree, which, under any other plan, must have been the result of a century.

I remain, Sir, your obedient Servant,
EDWARD LLOYD,
Mr. William Barron. Of Lillesden, Lieut.-Col.

1875.

MAURICE YOUNG'S

CATALOGUE

OF

CONIFERÆ,

AND

Hardy Ornamental Trees, Shrubs,

AND

EVERGREENS.

MILFORD NURSERIES,

NEAR GODALMING,

SURREY.

LONDON:—
ROBERT EDMUND TAYLOR, HORTICULTURAL AND GENERAL STEAM PRINTER,
19, Old Street, Goswell Road, E.C.

YOUNG'S

GOLDEN CHINESE JUNIPER,

(*Juniperus chinensis aurea.*)

During the two years that this plant has been before the public, it has more than justified the high opinions given upon it by the Press and the leading Horticulturists, both in England and on the Continent, that it is without doubt,

"THE FINEST GOLDEN CONIFER OF THE DAY."

The plants in this Nursery, despite the dry season, have grown as freely as the ordinary Chinese Juniper, and in colour have certainly surpassed that of any former years, so that I feel the greatest confidence in again recommending it to the notice of all lovers of Hardy Ornamental Trees.

It has been exhibited at the following Shows, when the highest honours were awarded to it:—

ROYAL HORTICULTURAL SOCIETY...	Aug. 2, 1871,	First Class Certificate.	
CRYSTAL PALACE	Aug. 5, 1871	,,	,,
MANCHESTER HORTICULTURAL......	Sept. 10, 1872	,,	,,
GLASGOW AND WEST OF SCOTLAND INTERNATIONAL HORTICULTURAL	Sept. 11, 1872	,,	,,
SOCIETÉ ROYALE D'AGRICULTURE ET DE BOTANIQUE DE GAND	Mar. 3, 1873,	First Class Silver Medal.	

On each occasion receiving the highest encomiums.

It has been supplied to—

HER MAJESTY THE QUEEN, Royal Gardens, Windsor.
H. R. H. THE PRINCE OF WALES, Sandringham.
H. R. H. PRINCE FREDERICK WILLIAM, Potsdam.
H. S. H. THE GRAND DUKE OF HESSE, Darmstadt.
H. M. THE KING OF THE BELGIANS, Laeken.

Also to many noblemen and gentlemen, and to the leading nurseries in England, on the Continent, and in America.

For description, see following extracts from Press reports :—

REPORT FROM *Gardeners' Chronicle*, SEPT. 7, 1872.

"Certainly one of the foremost places amongst golden-leaved Conifers must be accorded to MR. MAURICE YOUNG'S *Juniperus chinensis aurea.* The Chinese Juniper is well known as one of the hardiest and handsomest of Coniferous Shrubs, and when we state that the novelty just referred to is the exact counterpart of its parent, in all but its colour, and that that colour is equal at least in richness of hue to any golden Conifer hitherto known, but little further mention of it is needed. We may however add, from a recent personal inspection of the stock, that it is thoroughly constant. Not a plant amongst the entire stock shows the least tendency to run back ; but all, whether infants of 6 inches, or adolescents of 3 feet high, appear in the same aristocratic 'cloth of gold' array. There is, as we have said, nothing whatever but the colour—and that is an important element from the decorative point of view—to distinguish this from the type form of *Juniperus chinensis.* The original plant, which stands about twelve feet high, and the upper half of which is a mass of gleaming golden spray, is a conspicuous object from the high road in passing the Milford Nursery. The golden portion originated in a sport of one of the leading shoots, and now forms the entire apex of the plant, the lower half being of the ordinary green form. The colouration is not variegation strictly so called—not a sprinkling of yellow twigs or yellow leaves over portions of the spray, but the whole plant is suffused with it as if it had been bathed in gold, and the colour becomes the more intense the more fully and freely the plant is exposed to the light and the sunshine. Our notes indicate that the propagated plants take on a close pyramidal habit, and have moreover the twofold character of foliage which is seen in the parent, and that the colour on the more prominent portions of the plant is as bright as the tint of the golden Holly. Taking these various points into account, and coupling with them the free-growing hardy character of the plant, there is no exaggeration in prounouncing this novelty to be one of the best and most desirable of ornamental Conifers. 'All is not gold that glitters,' but in this golden Juniper MR. YOUNG has found what should prove to be a treasure."

* * *

EXTRACT FROM *Gardeners' Magazine*, JUNE 29, 1872.

"A foremost position, however, must be accorded to MR. YOUNG'S New Golden Chinese Juniper (*Juniperus chinensis aurea*), a beautiful bright golden sport from the Chinese Juniper, originated at the Milford Nurseries. It retains its bright colour throughout the winter as well as summer, and it must become one of the most favourite Conifers ever introduced."

* * *

ED. ANDRÉ in *l'Illustration Horticole*, 1872, p. 309.

"*Juniperus chinensis aurea.*"—This variety, raised by Mr. Maurice Young of the Milford Nurseries, Godalming, is one of the most beautiful Conifers ever obtained. The original plant is about 12 feet in height, and is as it were covered with a cloth of gold. It is not a variegation, but a sheet of gold which covers the whole plant. None of the young plants show the least tendency to run away to the green type. This novelty is considered one of the most striking that has been introduced into England for many years.

* * *

Price for Strong Young Plants, 7*s*. 6*d*., 10*s*. 6*d*., *and* 21*s*. *each.*
Larger Specimens, 42*s*., 63*s*., *and* 105*s*. *each.*

MAURICE YOUNG'S

CATALOGUE OF CONIFERÆ,

HARDY ORNAMENTAL

TREES, SHRUBS, AND EVERGREENS.

AUTUMN 1874.

CONIFERÆ.

:o:

PINUS (*The True Pine*).

s. d. s. d.

ARISTATA ....each 3 6 to 5 0

A pine found on the snowy mountains in North America, attaining there a height of from 30 to 40 feet. It is of the *Strobus* type, very distinct in habit and useful as a variety in collections.

AUSTRIACA—The Black Pine of Austria.

Syn. *nigricans.* Good plants, 1 to 1½ft., per 100, 10 0 — 16 0
,, *nigrescens.* ,, ,, 1½ to 2 ft., ,, 16 0 — 25 0
,, ,, 2 to 3 ft., ,, 30 0 — 40 0
,, ,, 3 to 4 ft., per doz. 6 0 — 12 0
,, ,, 4, 5, & 6ft., ,, 18 0 — 30 0

A rapid-growing tree, attaining a height of 80 to 100 feet, dense in habit, dark green in the colour of its foliage, and valuable for planting as screens or for shelter, on account of its great hardiness and free growth. The timber being very resinous, is strong and durable when of good age.

BEARDSLEYI ....Good plants, per doz. 24 0 — 30 0
Syn. *ponderosa.*

A large timber tree found in California and the North-West Coast of America. Timber valuable; quite hardy.

BENTHAMIANA ....Good plants, 2 to 3 and 4ft., per doz. 30 0 — 40 0

A very lofty tree, also from the mountains of California, growing to a great height; the foliage dark green and very long; handsome in its young state, and eventually making a noble tree. Timber said to be the best of all the pine tribe.

CEMBRA—Swiss Stone Pine ...Nice young plants, 2 to 3ft., per doz. 6 0 — 9 0
4 to 5ft., ,, 15 0 — 18 0

A native of the highest mountains in Switzerland and Siberia, height 50 to 80 feet, erect and close growing in habit, regularly furnished with branches, which are thickly covered with glaucous green foliage. Timber soft, fine in grain, and very fragrant; it furnishes the wood from which the Tyrolese shepherds and peasants cut the curious little men and animals so widely and well known all over Europe.

DENSIFLORA ....9 to 12in., per 100 30 0 —

Native of China, of compact habit and deep green foliage.

EXCELSA—Nepal ....Young transplanted plants, per 100 21 0 — 30 0
2 to 2½ft., per doz. 18 0 — 24 0

Growing on the mountains from 6,000 to 10,000 feet elevation; a fast growing tree, sometimes reaching a height of 150 feet. Timber soft, white, and resinous.

INSIGNIS—The Remarkable Pine ...Good plants, per doz. 12 0 — 24 0

Very appropriately named; as to colour and general appearance, it is quite distinct from any other pine. The foliage is a bright rich grass green, thickly set on the branches. It makes a handsome tree of from 80 to 100 feet, and thrives best on high situations not too much exposed; in low damp places it is sometimes killed or injured by severe winters. It is a native of California.

s. d. — s. d.

JEFFREYII ....Good plants, each 2 6 — 5 0

From Northern California; described as a noble tree, growing 150 feet high, and 4 feet in diameter. The foliage is 8 or 9 inches long, and greyish-green in colour. A very distinct and hardy pine.

LAMBERTIANA ....Plants, 4 to 5ft., each 2 6 — 5 0

A large tree from the northern parts of California, 150 to 200 feet high. Timber white and soft; tree very hardy.

LARICIO—THE CORSICAN PINE ....Young plants, per 100 10 0 — 16 0
3 to 4ft., per doz. 9 0 — 12 0

A lofty rapid-growing pine, 80 to 130 feet high, similar in general character to *P. Austriaca,* but more pyramidal in growth; it is a valuable tree for general planting. Timber resinous, coarse, and elastic, but durable.

MACROCARPA ....Good plants, 3 to 4ft., each ... — 5 0

A large tree, 80 to 100 feet high, on the mountains of California; leaves 9 to 10 inches long, of a glaucous-green. Habit of tree vigorous; very hardy.

MONTICOLA ....Good plants, 6 to 8ft., each 3 6 — 5 0

A rapid growing pine of the *Strobus* or Weymouth type, found in California; 80 to 100 feet high, very hardy and makes a handsome tree.

MUGHO...Young plants, per doz. 6 0 — 9 0
Syn. *uncinata.* Specimens, 6 to 8ft., each 3 6 — 5 0

A native of Central and North-Western Europe, forming a tree 30 feet high, of dense habit and dark green colour. Timber heavy and durable.

PONDEROSA. *See* BEARDSLEYII.

PYRENAICUM ....Good plants, each from 2 6 — 3 6
Syn. *Monspeliensis.*
,, *Fenzlii.*

A very handsome tree, 60 to 80 feet high, from the Pyrenees. The form of the tree is good; the reddish-brown colour of the bark, and the bright pale green foliage render this a very desirable tree.

STROBUS—THE WEYMOUTH PINE ....3 to 4ft., per 100 16 0 — 30 0
Good plants, 4 to 7ft., per doz. 9 0 — 18 0

A native of Canada and parts of the United States, making a tree 100 to 150 feet high. Timber light, free from knots, and easily worked.

—— COMPRESSA ....each 2 6 — 3 6

A dwarf variety of Weymouth Pine, of dense habit, would be suitable to place on a lawn, where such a bush is required.

ABIES (*The Spruce Fir*).

ALBA—THE WHITE SPRUCE FIR...Plants, 18 to 24in., per 100 30 0 — 40 0
3, 4, and 5ft., per doz. 6 0 — 18 0

A native of Canada and North America, growing to a height of 40 to 50 feet; it forms a regular pyramid; foliage silvery-grey, and light bark.

ALCOQUIANA ....Plants, each 10 6 — 15 0

A very pretty Spruce from Japan, of close habit; pale green foliage, very silvery underneath. As the plant grows large, it becomes very beautiful.

CANADENSIS—HEMLOCK SPRUCE ...Good plants, 3 to 6ft., per doz. 6 0 — 18 0

A large tree, 80 to 100 feet in Canada and North America. It has a graceful drooping habit, small green leaves, glaucous underneath, and may be fitly styled the Weeping Willow amongst Conifers; it delights in rather a moist situation, and is a very desirable plant.

—— NANA ....

A compact conical form of the preceding species, having the ends of the shoots drooping; originated in this Nursery and not yet sent out.

DOUGLASSI ....Good plants, 1 to $1\frac{1}{2}$ft., per 100 ... — 70 0
,, $1\frac{1}{2}$ to 2 ft., ,, 10 0 —100 0
,, 2 to 3 ft., per doz. 12 0 — 18 0

s. d. — s. d.

DOUGLASSI ....good plants, 4 to 5 ft., per doz. 30 0 — 42 0
„ 5 to 6 ft., „ 60 0 — 84 0
Specimens, 7 and 8ft., each 7 6 — 10 6

This hardy, noble, and valuable tree deserves to be extensively planted, as it is not only one of the most ornamental, but one of the best timber trees of all the firs. It is rapid in growth, very handsome in its habit, dark green in colour on the surface of its foliage, slightly glaucous beneath. It is from the North-West Coast of America and California, where it forms magnificent trees 200 feet high, and 8 to 10 feet in diameter.

ENGELMANNI ....each ... — 5 0

EXCELSA—Common Norway Spruce, Plants, 3, 4, 5, and 6ft., per doz. 6 0 — 18 0
Fine plants, 8 to 10ft., per doz. 24 0 — 42 0

A useful plant for shrubberies or cover planting.

EXCELSA CLANBRAZILIANA
—— **COMPACTA.**
—— **ELEGANS.**
—— **GREGORYANA.**
—— **PYGMÆA.**
—— **PYRAMIDALIS.**
} ....Price, each 2 6 — 7 6

All dwarf varieties of the Common Spruce.

—— **ERECTA** ....each ... — 2 6

An upright variety of Spruce.

HOOKERIANA ....Good plants, each 2 6 — 3 6
Syn. *Pattonii.*

From California, and described as a magnificent tree, attaining a height of 200 to 300 feet; when grown freely it is very pretty and quite hardy.

MENZIESII ....Young plants, 2½ to 3½ft., per doz. ... — 4 0
Large plants, 5, 6, and 7ft., per doz 9s. 12 0 — 18 0

From Northern California, a tree 60 to 70 feet high, pyramidal in form, dense in habit, foliage green above and very silvery below, giving to large trees a very beautiful appearance in sunlight. It is quite hardy, and delights in rich moist soil. Timber of first-rate quality.

MERTENSIANA—Californian Hemlock Spruce.
Good plants, per doz. 18 0 — 24 0
Syn. *Albertiana.*
„ *Williamsonii.*

A handsome fast growing tree, of from 100 to 150 feet high, in Oregon and California. It is very hardy, and in general appearance resembles the Hemlock Spruce previously described.

NIGRA—The Black Spruce ....Plants 2 to 3ft., per 100 40 0 — 75 0
4 to 5ft., per doz. 12 0 — 18 0

Of close symmetrical habit in its young growth, eventually making a tree 60 to 100 feet high in Canada and North America. The timber is bright, elastic, and strong. The plant thrives best in rich moist situations.

ORIENTALIS—The Eastern Spruce, nice little plants, 9 to 18in. ....per 100 10 0 — 16 0
Good plants, each 3 6 — 7 6

Found on the mountains of the Caucasus and Imerétia. It is a dense-growing dark green plant in its young state, and forms a lofty tree of 70 or 80 feet; very hardy.

POLITA ....Good plants, each 5 0 — 10 6

A new species from Japan, a very vigorous grower, distinct and handsome.

SIEBOLDII—Japan Hemlock Spruce .... each 3 6 — 5 0
Syn. *Abies Tsuga.*
„ *Tsuga Sieboldii.*

A tree of from 30 to 40 feet in height, of similar habit to the Hemlock Spruce (*Abies Canadensis*), the leaves are much shorter, and the general character sufficiently distinct to make it a desirable plant in all collections.

—— **NANA** ....each 5 0 — 7 6

A dwarf form of the above.

PICEA (*The Silver Fir*).

s. d. s. d.

AMABILLIS—The Lovely Silver Fir, grafted plants with leads ....each ... — 7 6

This is the true species described by Loudon, as sent home by Douglas. It has dark glossy green leaves, slightly glaucous underneath, and thickly set on the branches, which are regularly disposed on the stem. It is very scarce, no seed having been sent home since the original cones in 1831.

CEPHALONICA ....Good plants, per doz. 18 0 — 24 0

A native of Cephalonia, and makes in this country a very handsome conical-shaped tree if planted on high dry situations. It is very liable to injury by spring frost if grown in valleys or low places, but otherwise perfectly hardy.

MAGNIFICA ....Good plants, each 5 0 — 21 0
Syn. *Nobilis robusta.*

From California; and a really magnificent tree. The foliage is of a glaucous green, thickly set on the branches. It forms a handsome pyramidal tree, perfectly hardy.

NOBILIS ....Seedling plants, 9 to 12 inches, per 100 ... — 75 0
,, 18 ,, per doz. 18 0 — 24 0
,, 2 to 3ft. ...... each 3 6 — 7 6
Specimens, each from 10 6 — 21 0
And larger specimens, each from 42 0 — 63 0

A truly noble tree, attaining in California the height of 200 feet. It has regular spreading branches, thickly covered with bluish-green foliage. It is of majestic appearance, free growth and perfectly hardy.

NORDMANNIANA—Nordmann's Silver Fir.
Young plants, per 100 ... — 50 0
1½, 2, and 3ft.; per doz., 18s., 24 0 — 42 0
Fine specimens, 6 to 8ft., each 21 0 — 63 0

A splendid tree, common on the Crimean mountains, growing to the height of 100 feet; the branches are dense, regularly disposed on the trunk, and covered with dark green shining leaves, slightly glaucous below. The young shoots in spring are most delicate green, forming a beautiful and striking contrast to the rich deep colouring of the old leaves. Timber good. This Fir should be extensively cultivated, as it is one of the hardiest and most ornamental of all the Silver Firs.

—— PENDULA ....

A weeping variety, not yet in commerce.

PARSONSII .... Good plants, each from 10s. 6d., 21 0 — 63 0
Syn. *Lowii.*
,, *Lasciocarpa.*

This beautiful Pine has the same general character as *Nobilis*, but is distinct in the form and colour of the foliage; equally hardy, and can be confidently recommended. It attains a large size in California, and is of rapid growth.

PINSAPO ....Good plants, 2, 3, and 4ft., per doz. 24 0 — 42 0
Specimens, 5, 6, & 7ft. each 10 6 — 21 0

A native of the mountains in Spain, where it forms a fine tree, 60 or 70ft. high, rather conical in shape, and of compact habit; a very desirable tree for single specimens.

CEDRUS (*The Cedar*).

AFRICANUS—Mount Atlas Cedar.
Plants 1½ to 2ft., per doz. 6 0 — 12 0
4 to 5ft. ,, ... — 30 0
Syn. *Atlantica.* Fine specimens, 8 to 10ft. ,, 7 6 — 10 6

A noble tree, from the Atlas Mountains, reaching a height of 100 feet, similar in character to the *C. Libani*, except that it is of more rapid growth, and paler in the colour of its foliage.

s. d. s. d.

DEODARA—THE INDIAN CEDAR. Young twice-transplanted plants ....1 to 1½ft., per 100 ... — 50 0
1½ to 2 ft. ,, ... — 100 0
2 to 3 ft. per doz. 18 0 — 24 0
3½ to 4½ft. ,, 42 0 — 60 0

Now too well known to require any description of its general character. It makes an enormous tree in the Himalayan Mountains. Its timber is much used for both public and private buildings, being very compact, and capable of receiving a high polish.

—— **ERECTA** ....each 2 6 — 3 6

An upright growing bluish variety.

—— **ROBUSTA** ....each 1 6 — 2 6

A strong-growing variety.

—— **VERTICILLATA** ....each 1 6 —

A handsome upright bluish variety.

LIBANI—THE CEDAR OF LEBANON. Good plants, 2 to 3 and 4ft. ....per doz. 18 0 — 30 0

Like the *Deodara*, requires no description here. The many splendid specimens which may be seen in the parks and grounds throughout the country, convey the best idea of the grandeur of this fine old tree.

CEPHALOTAXUS (*The Cluster-Flowered Yew*).

DRUPACEA ....Good plants, each 1 6 — 2 6
Syn. *Fortunei fœmina.*

A fine compact evergreen tree. In China and Japan 20 to 30 feet high, and perfectly hardy.

FORTUNEI ....Plants, each ... — 2 6
Syn. *Fortunei Mascula.*

A hardy evergreen tree from China and Japan, 30 to 40 feet high, foliage longer than the preceding, and the plant more loose in habit.

PEDUNCULATA ....Good plants with leads, each 5 0 — 7 6
Syn. *Taxus Harringtonia.*

A handsome small evergreen tree, 20 to 30 feet. China and Japan. Quite hardy.

CHAMŒCYPARIS.

SPHŒROIDEA AUREA ....each 5 0 — 10 6

A variety of the White Cedar, of pyramidal habit, bright green foliage, the young shoots of a bright golden colour; of recent introduction, but it promises to be a very handsome plant.

CRYPTOMERIA (*The Japan Cedar*).

ELEGANS ....Good young plants, 1ft., per doz. .. — 12 0
2 to 3ft. ,, 18 0 — 30 0
Specimens, 4 to 5ft. each 5 0 — 10 6

A useful and very beautiful introduction from Japan, of close pyramidal habit, foliage bright green in summer, changing sometimes to a rich purple, at others to a reddish-brown during the winter months. It is very hardy, and makes a good plant, in a small state, for winter bedding, or even for pot-culture for the flower-stand or conservatory.

JAPONICA SPIRALITER FALCATA ....each 3 6 — 5 0

A very curious variety of robust habit and thick leaves, which are twisted round the branches in many different forms.

—— **ALBA VARIEGATA** ....each 2 6 — 5 0

A dwarf variety, having the young shoots white.

s. d. s. d.

JAPONICA VERA ....Young plants, each 1 6 — 5 0

Recently imported by Siebold from the north of Japan, and must not be confounded with the species originally introduced from the north of China. It is of better habit, and more hardy.

—— LOBBI....................................3 to 4ft. plants, per doz. 12 0 — 18 0
Syn. *Viridis.*

This variety differs from *C. japonica* (the old sort) only in colour, and is perhaps more compact in growth.

CUPRESSUS (*Cypress*).

LAWSONIANA ....Good plants, 2 to 3ft., per doz. ... — 9 0
Syn. *Chamæcyparis Boursieri.* Ditto 4, 5, 6, & 7ft. ,, 18 0 — 42 0

A most valuable plant, introduced a few years ago from California. It forms a graceful tree, 60 to 100 feet high, very hardy, and useful as an ornamental shrubbery plant, a single specimen, or for hedges, as it bears the knife well.

—— ALBA SPICA ....Good plants, 1ft., each ... — 1 6

A continental variety, having the young shoots tipped with white.

—— —— —— YOUNG'S (VARIETY) .... Good plants, each 2 6 — 5 0

Selected from a batch of seedlings several years ago, as being the most distinct and perfectly marked white-tipped variety in the trade. It is very free in growth, and the countless white spots with which it is covered render it a particularly attractive plant.

—— —— —— NANA...each 5 0 — 10 6

A dwarf compact little plant, with the young shoots quite white.

—— ARGENTEA...................................Good plants, each 1 6 — 3 6

A very beautiful silvery variety, of very compact habit, the ends of the shoots drooping in a very graceful manner.

—— CÆRULEA ....Good plants, each 1 6 — 3 6

A very compact-growing form, of good habit, and foliage of a bluish-green, shaded with grey.

—— ERECTA VIRIDIS ....Good plants, each 2 6 — 7 6

An upright free growing variety, with beautiful green foliage ; very desirable.

—— FRAGRANS..........................Plants, 2 to 3ft., per doz. ... — 12 0
4, 5, and 6ft. ,, 18 0 — 36 0

A very fast-growing variety, foliage more delicate, and habit more drooping than *Lawsoniana.*

—— GRACILIS ....Good plants, each 1 6 — 3 6

A globose form of *Lawsoniana,* with the points of the shoots drooping, which relieves the stiffness peculiar to most plants of a globular shape.

—— LUTEA..................................Good plants, each from 3 6 — 21 0

A new, very distinct, and beautiful variety, being perfectly yellow during the summer months, free in habit, and when it attains a large size will form a very attractive and striking feature.

—— NANA ....each 2 6 — 5 0

A pretty compact little plant.

—— VARIEGATA ALBA ......
—— —— AUREA.................. } .... Good plants, each 2 6 — 3 6

Two pretty varieties, having portions of their foliage respectively gold and silver.

MACROCARPA ....Good plants, 2 to 3ft., per doz. 18 0 — 24 0
Syn. *Lambertiana.*

A very fine and rapid-growing Cypress from California, where it is found from 50 to 60 feet high ; it grows well near the sea coast, and is hardy on elevated situations, but sometimes cut by winter if grown in low moist places.

NUTKAENSIS. *See* THUJOPSIS BOREALIS.

JUNIPERUS (*The Juniper*).

All the species and varieties of Juniperus enumerated in this Catalogue are handsome evergreen shrubs, suitable for shrubbery or single specimens on lawns where it is not desirable to have trees which would grow to a large size.

		s.	d.		s.	d.
CHINENSIS (The Chinese Juniper), good plants, 2ft.,	pr. dz.	12	0	—		
Ditto 3, 4, 5, & 6ft.	,,	18	0	—	60	0
One of the very finest hardy plants in cultivation; it form a compact pyramidal tree about 20 feet in height, of a bright yet dark green, with occasional glaucous prickly shoots in the Spring. The male plant is covered with bright yellow flowers, giving it a peculiar and very striking appearance. It has now been introduced about 50 years, and has never been injured by our most severe winters. There are male and female varieties; the one here alluded to is the former, which is by far the handsomest.						
CHINENSIS AUREA—YOUNG'S NEW GOLDEN CHINESE JUNIPER. For description, *see* page 3.						
—— —— VARIEGATA	each	3	6	—	7	6
A rather dwarf growing variety of the Chinese Juniper, having some of its sprays of a bright golden colour; it is very pretty.						
DRUPACEA	each	1	6	—	2	6
EXCELSA	,,	2	6			
HIBERNICA—Irish Upright	per doz.	12	0	—	18	0
—— COMPRESSA	each	2	6	—	5	0
Very dwarf and pretty.						
JAPONICA	each	1	6	—	2	6
From Japan.						
—— AUREA..	each	2	6	—	5	0
—— ARGENTEA VARIEGATA	each	3	6	—	7	6
LEEANUS	each	1	6	—	3	6
RIGIDA (Japan)	each	2	6	—	3	6
SABINA—Savin	per 100	25	0			
—— TAMARISCIFOLIA	per doz.	6	0			
SHEPPARDII (Japan)	each	1	6	—	2	6
SPHŒRICA (Japan)	each	1	6	—	2	6
SUECICA (Swedish)	2 to 3ft., per doz.	6	0	—	9	0
TRIPARTITA	each	1	6	—	2	6
VIRGINIANA—Red Cedar	Plants, 4 to 6ft., per doz.	12	0	—	18	0
—— ALBA VARIEGATA	each	1	6			
A handsome variety; foliage spotted with white.						

LARIX (*Larch Fir*).

See FOREST TREES.

LIBOCEDRUS.

		s.	d.
CHILIENSIS	each	2	6
A handsome evergreen tree from the Chilian Andes, growing there from 60 to 80 feet high, the foliage is of a bright green, glaucous at the sides. It is only quite hardy in favourable situations.			

—— DECURRENS. *See* Thuja gigantea.

PRUMNOPITYS.

		s.	d.		s.	d.
ELEGANS	Good plants, 1 to 2ft., per doz.	12	0	—	24	0
A very handsome tree from the mountains of Chili, growing, at an elevation of 5,000 to 6,000 feet, to the height of 50 or 60 feet; in a young state it looks something like a variety of Yew, but afterwards is said to resemble in habit the *Abies Douglassi.*						

PSEUDOLARIX.

	s.	d.		s.	d.
KEMPFERI ....Plants, each 3s. 6d.	7	6	—	42	0
Syn. *Larix Kempferi.* ,, *Abies Kempferi.* Specimens, price on application.					
This is the Golden Larch of China, a very valuable and beautiful tree, the foliage in the spring and summer being of a beautiful bright green, 1½ to 2 inches long, and rather broad; the colour deepens towards autumn, when, before falling, it assumes a rich golden-yellow. It will form a large tree in this country, and its extreme beauty cannot fail to recommend it to all lovers of handsome trees.					

RETINOSPORA.

All the species of this genera have been recently introduced from Japan; some of them make trees of size, but most are dwarf in habit, forming pyramids or bushes. All are hardy and evergreen.

	s.	d.		s.	d.
ERICOIDES............Good plants, per doz. 6s. A conical compact bush, greyish-green in summer, and turning purple in winter; admirably adapted for winter bedding or pots.	9	0	—	12	0
FILICOIDES ....Plants, each Bright green foliage on reddish stems; should be grown as a bush, when it makes a pretty fern-like plant.	2	6	—	21	6
FILIFERA............Good plants, each Makes a pyramidal bush, with the ends of its shoots drooping in long filaments, some of which are tesselated.	1	6	—	10	6
—— GRACILIS ....each A more slender form of the above.	2	6	—	10	6
LEPTOCLADA ....Plants, per doz.	9	0	—	12	0
Specimens, each A slow-growing pyramidal bush, of a dark bluish-green, very pretty for winter beds or pots. It is quite a miniature tree.	3	6	—	7	6
LYCOPODIOIDES............each A dense growing shrub or dwarf tree, deep green foliage, very distinct.	3	6	—	21	0
OBTUSA—"TREE OF THE SUN,"					
Good plants, 1 to 1½ft., per 100	...		—	75	0
1½ to 2 ft., ,,	...		—	100	0
2 to 3 ft., per doz.	...		—	15	0
3 to 4 ft., ,,	18	0	—	30	0
4 to 5 ft., ,, A tall evergreen tree, growing from 70 to 100 feet high, of great beauty; thrives well in this country, and planted as single specimens is very handsome. It is also a good shrubbery plant, and as it bears clipping well, it will be a good plant for hedges. The timber is described as white and fine grained, and highly valued by the Japanese.	36	0	—	42	0
—— ALBA ....Plants, each Similar in general character to the former, rather more compact in habit, and the young shoots pure white during the spring and summer months. A very beautiful variety, new and scarce.	3	6	—	15	0
—— AUREA ....Plants, each A rapid-growing variety, also of the same habit as *obtusa*, and having the branches suffused with gold.	2	6	—	10	6
—— ERECTA............Plants, each An upright form.	1	6	—	2	6
—— GRACILIS ....Plants, each Rather dwarf in habit, very compact, a rich dark green.	2	6	—	5	0
—— NANA ....Plants, each Very dwarf and compact, forming a pretty little bush, of a rich deep green.	3	6	—	7	6
—— —— ALBA VARIEGATA ....Plants, each General character like the preceding, with many white spots on the foliage.	3	6	—	5	0

s. d. — s. d.

OBTUSA NANA AUREA ....Plants, each 2 6 — 15 0
A compact dwarf bush, with foliage of a rich bronzy-yellow, very desirable.

—— **PUMILA** ....each ... — 3 6
Forms a dwarf bush.

PISIFERA ....Good plants, 1 to 1½ft., per 100 ... — 75 0
,, 1½ to 2 ft., ,, ... —100 0
,, 2 to 3 ft., per doz. ... — 15 0
,, 3 to 4 ft., ,, 18 0 — 30 0
A tree of more slender growth than *R. obtusa*, paler green in the colour, and the points of the shoots drooping. It is a very graceful plant, and certainly worthy of cultivation.

—— **ERECTA** ....each ... — 2 6
A compact upright form of the above, foliage of pale green, distinct.

—— **VARIEGATA AUREA** ....Young plants, each 5 0 — 10 6
A dwarf bush, bluish-grey foliage spotted with pale yellow. A curiosity; rather scarce.

PLUMOSA, young plants, per doz., 9s. to 12s.; good plants, each 2 6 — 7 6
A most beautiful, compact, pyramidal tree, of a soft grey-green colour, light and graceful in habit, and a most desirable plant; useful for winter bedding, pots, or to form specimens for lawns.

—— **ARGENTEA** ....each 2 6 — 5 0

—— **AUREA** ....per doz. 9s., 12 0 — 18 0
Fine plants, each 5 0 — 21 0

—— —— **PUMILA**.. ,, ... — 2 6

—— **FLAVESCENS** .... ,, ... — 2 6

—— **VARIEGATA ALBA** .... ,, 2 6 — 10 6

The above five varieties of *plumosa* are similar, in their general character, to that species. *Argentea* is tipped with white; *aurea* is a most beautiful golden colour, and one of the most effective decorative plants of this class; *flavescens* another form of *aurea;* and *pumila* a dwarf-growing kind. *Variegata alba* is a charming plant, its soft grey, bluish foliage being distinctly and beautifully spotted with clear white, making the plant appear covered with small snow-flakes. *Plumosa* and its varieties are sometimes taken as forms of *pisifera*, but, on comparing the botanical features of each, and considering the great difference in habit, I think *plumosa* must be a distinct species, and *aurea* and the rest *varieties*, and in no specific manner allied to *pisifera*.

SQUARROSA, *true* ....Good plants, per doz., 9s. 12 0 — 18 0
Larger plants, each 3 6 — 7 6
A very elegant pyramidal bush, points of the shoots drooping and feathery. Colour silvery-bluish grey, very effective in small plants for bedding, and making nice specimens where a plant of large size is not required. A pretty and desirable plant.

SALISBURIA.

ADIANTIFOLIA—The Maiden Hair Tree.
Syn. *Ginko biloba.* Plants, each 1 6 — 5 0
A large deciduous coniferous tree. Native of Japan.

SCIADOPITYS.

VERTICILLATA—The Umbrella Pine ....Plants, each 5 0 — 42 0
So called from having its leaves arranged on the points of the shoots in whorls in the form of an open umbrella. It makes a compact conical tree, about 20 feet high, of slow growth, but very handsome.

TAXODIUM.

		s.	d.	s.	d.
DISTICHUM—DECIDUOUS CYPRESS.	Plants, 4, 5, and 6ft., each	1	6	2	6
—— PENDULUM	Plants, each	2	6	3	6
Both having very handsome light foliage in spring and summer, turning to reddish-brown in autumn. The latter plant, although generally known as *T. distichum pendulum*, is no doubt *T. Sinensis*, also called *Glyptostrobus heterophylla*. I have this year found in my Nursery amongst some Taxodium distichum, a very distinct weeping form to which the name of "pendula" may be more properly applied.					
SEMPERVIRENS ALBA VARIEGATA	Each	1	6	10	6
A variety of *T. sempervirens*, having the ends of the shoots a beautiful creamy-white; very handsome.					

TAXUS (*Yew*).

		s.	d.	s.	d.
ADPRESSA	each	1	6	2	6
—— ERECTA	each	1	6	5	0
BACCATA—COMMON YEW	9 to 12in., per 100	16	0		
	1 to 1½ft. ,,	25	0		
	1½ to 2 ft. ,,	30	0	40	0
	2 to 2½ft. ,,	50	0	75	0
	2½, 3, 4, and 5ft., per doz. 9s., 12s.,	18	0	24	0
—— large Yews, 8 to 12ft., on stems with good heads and roots,	each	7	6	21	0
—— AUREA—GOLDEN YEW	Good plants, 1 to 1½ft., per doz.	12	0	18	0
	,, 2 to 2½ft., ,,	24	0	42	0
Very effective amongst evergreens during the summer months, on account of the brilliant golden colour of the young shoots.					
—— —— worked on stems of Irish and Common Yew, 3 to 4ft.,	each	3	6	10	6
—— CROWDERI	,,	1	6	3	6
—— DOVASTONII—WEEPING YEW	,,	3	6	10	6
—— —— VARIEGATA	,,	5	0	10	6
—— ELEGANTISSIMA	1 to 1½ft., per doz.	12	0	18	0
	2 to 2½ft., ,,	24	0	42	0
A close-growing compact golden Yew.					
—— FASTIGIATA (Irish)	1½ to 2ft. per doz.	6	0	9	0
	3, 4, to 5ft., fine plants, ,,	12	0	30	0
	6, 7, & 8ft. ,, each	3	6	10	6
—— —— VARIEGATA—THE GOLDEN IRISH YEW, Young plants	each	1	6	5	0
—— HORIZONTALIS		2	6	5	0
A strong growing variety, with long horizontal branches, slightly pendulous; will no doubt make a very effective plant.					
—— PYRAMIDALIS	Plants 2 to 3ft., per doz.	18	0		
Another form of upright Yew, lighter in colour than the Irish, and more pyramidal in habit.					
HARRINGTONIA. *See* CEPHALOTAXUS PEDUNCULATA.					
JAPONICA	per doz.	18	0	30	0
A fine dark-coloured species from the Corea and Japan.					

THUJA (*Arbor Vitæ*).

The Abor Vitæs are natives of both hemispheres, and to distinguish the one from the other, botanists have divided them into two divisions—the term "Biota" being applied to the Chinese or Eastern Arbor Vitæs, whilst to those of America, the appellation of "Thuja" is still retained. The two sections being so very distinct in habit and character, I have thought it best to publish them according to their botanical arrangement, taking the Biotas or Chinese Arbor Vitæs first. These are mostly large bushes or small trees, and are natives of China, Tartary, North of India, and Japan.

BIOTA.

s. d. s. d.

ORIENTALIS—Chinese Arbor Vitæ ....3ft., per doz. 12 0

—— **AUREA** ....Plants 1½ to 2ft., ,, 18 0 — 24 0
Fine specimens, each 10 6 — 42 0

A globular variety, having the tips of the young shoots a bright gold in spring.

—— **ELEGANTISSIMA AUREA** ....nice examples, each 1 6 — 3 6
Specimens ,, 5 0 — 10 6

This form of golden Arbor Vitæ is pyramidal instead of globose in habit, and is beautifully marked with gold in the Spring. It is a very pretty plant.

—— **FALCATA** ....Good plants, each 2 6

A fast growing pyramidal tree from Japan, of recent introduction.

—— **FORTUNEI**..each 2 6

A dwarf compact variety from Japan, bright green in colour, and a pretty plant.

—— **SEMPER AUREA** ....Young plants, each 2 6 — 7 6
A few specimens, each 21 0

A new variety, which retains its golden tint all the year round, of dwarf habit, but free growth. A desirable acquisition.

—— **JAPONICA PENDULA** ....each 7 6 — 10 6

A globose form of Biota, composed of filiform branches which are quite pendulous; it is very distinct, and will no doubt be a very desirable acquisition to our dwarf Coniferæ.

—— **TRIANGULARIS**...............................Plants, each 3 6

A new variety, so called from the position in which the branches are arranged, of erect habit, and bright green foliage.

—— **VARIEGATA**...each 1 6 — 3 6

A golden variegated form.

—— **ZUCCARINIANA** ....Good plants, per doz. 18 0 — 30 0

A very distinct variety from Japan, quite globular in habit, and of a beautiful bright green, which colour it retains well through the winter.

PENDULA—Weeping Arbor Vitæ.................Plants, each 2 6 — 5 0
Syn. *Thuja pendula.*
,, ,, *filiformis.*

A bush, or small tree, from Chinese Tartary, introduced about the year 1800, and recently found also in Japan. It has drooping filiform shoots, and may be considered more curious than beautiful.

THUJA.

(NATIVES OF NORTH AMERICA).

ERICOIDES ....per doz. 6 0 — 12 0

A plant of doubtful origin; it forms a dwarf conical bush, glaucous-green in summer, and of a brownish tint in winter. Suitable for small beds or for potting.

		s.	d.		s.	d.
GIGANTEA	Plants, 1½ to 2ft., per doz.	...		—	18	0
	2 to 3ft., ,,	24	0	—	30	0
Syn. *Craigeana.*	Specimens, 4 to 5ft. ......each	3	6	—	5	0
,, *Libocedrus decurrens.*						

Makes a lofty tree in California of 120 feet high, is rapid in growth, with rich deep green leaves; a thoroughly good plant.

—— ALBA VITTATA ....

A form of the preceding, having the tips of the shoots creamy-white; a very beautiful variety, originated here, and not yet in commerce.

		s.	d.		s.	d.
LOBBII	Good plants, 3 to 4ft., per 100	...		—	75	0
Syn. *Thuja Menziesia.*	4 to 5ft., ,,	...		—	100	0
	5 to 6ft., per doz.	18	0	—	30	0
	6 to 8ft., ,,	42	0	—	63	0

A tall, rapid growing tree, found on the north-west coast of America. In colour it is a bright rich green, the back of the young branches a reddish-brown. A very ornamental tree, and useful either in the shrubbery as single specimen, or for hedges; its rapid growth and close habit render it superior to all other Arbor Vitæs for this purpose.

		s.	d.		s.	d.
OCCIDENTALIS—American Arbor Vitæa,	2 to 3ft., per 100	...		—	16	0
	4 to 5ft., ,,	20	0	—	50	0
	5 to 6ft., per doz.	9	0	—	18	0
	6 to 8ft., ,,	24	0	—	36	0

Also a good and well-known plant for hedges.

		s.	d.		s.	d.
—— ARGENTEA	each	...		—	7	6
—— LUTEA	,,	5	0	—	7	6

Two varieties of American origin, the former producing young shoots white, the latter being a golden form and retaining its colour all the year, but like all purely golden plants, much brighter during spring and summer.

		s.	d.		s.	d.
—— VARIEGATA ALBA	each	...		—	2	6

Foliage spotted with white.

		s.	d.		s.	d.
—— VERVAENANA	Plants, per doz.	12	0	—	18	0

A variety having the surface of the foliage of a yellow cast.

		s.	d.		s.	d.
PYGMÆA	Plants, per doz.	18	0	—	30	0
	Grafted on stems, 12 to 18 inches	3	6	—	7	6

A very dwarf kind of Thuja, or perhaps a Retinospora, from Japan. Foliage rich green, with reddish-brown bark. Curious, and well adapted for rockery.

		s.	d.		s.	d.
WAREANA	Good plants, 1½ to 2ft., per 100	...		—	25	0
	2 to 3 and 4ft., ,,	50	0	—	75	0
	5 to 6ft., per doz.	12	0	—	24	0

A most useful, compact, and hardy evergreen shrub, for general planting and shrubberies. Having a large stock, I can offer it at the above low rates.

THUJOPSIS.

		s.	d.		s.	d.
BOREALIS	Good plants, 3, 4, 5, and 6ft., per doz.	18	0	—	60	0
Syn. *Cupressus Nutkaensis.*						

A tall evergreen tree from Nootka Sound and the north-west Coast of North America, where it attains the height of 100 feet. It is conically pyramid in habit, of a light but glossy green, sometimes having a bluish shade; it grows freely in this country, and may be confidently recommended as one of the best of the Cypress or Arbor Vitæ kind yet introduced.

—— AUREO-VARIEGATA ....

A variety having a number of the branchlets of a bright golden yellow; it originated here, and will, doubtless, prove one of the most handsome of all variegated Coniferæ. Not yet sent out.

		s.	d.		s.	d.
—— COMPACTA	each	...		—	5	0

A conical compact form, of a beautiful bright bluish-green.

s. d. s. d.

BOREALIS VARIEGATA ....Young plants, per doz. ... — 18 0
Large plants, each 3 6 — 10 6

Is a form of the preceding, but spotted with white variegation; new, and a very handsome plant.

DOLABRATA ....Good plants, per doz. 12 0 — 60 0
Specimens 10 6 — 21 0
A few specimens, each 42 0 —150 0

Perhaps the most distinct and beautiful of all the recent introductions from Japan, where it forms a tall evergreen tree. The habit of the plant here is pyramidal, and the colour of its foliage is a bright dark green, glaucous below. Young plants have been out in this nursery for several years past, and it is without doubt a thoroughly hardy plant.

—— VARIEGATA...............................Good plants, per doz. 12 0 — 30 0
A few specimens, each 42 6 —150 0

A form of the above with some of the branches white.

LÆTEVIRENS ....Young plants, each 1 6 — 5 0

I should think this to be a variety of *Dolabrata* which has been dwarfed by cultivation, and which is known in Japan under the name of "Nezu;" it is exactly like *T. Dolabrata* on a much smaller scale. I have plants growing freely, and every year it seems to approach nearer to what I believe to be its normal type. Nevertheless it is a very pretty little plant, with branches and leaves like a delicate Lycopodium, and for the fernery or as a pot plant it is very desirable.

STANDISHII ....Good plants, each 2 6 — 7 6

A good hardy tree from Japan, having a straight stem and drooping branches, the colour of the foliage being of rather an olive green.

TORREYA (*The Californian Nutmeg*).

s. d. s. d.

MYRISTICA ....Plants, each ... — 3 6

A Taxaceous plant, growing from 20 to 40 feet high in the Sierra Nevada of California; quite hardy.

WELLINGTONIA (*The Mammoth Tree of California*).

GIGANTEA ....Plants about 1ft., per 100 ... —100 0
1½ to 3ft., per doz. 18 0 — 42 0

This celebrated tree requires no description here, being now so well known; it is asserted to be the largest tree yet discovered, the dimensions of one tree being—height 363 feet, circumference near the ground 93 feet, and at 100 feet from the ground 45 feet. It grows rapidly in this country, and to ensure really good specimens, it is best to plant them small.

—— VARIEGATA ... .each 3 6 — 7 6

A variety with golden variegation.

HAMPERS, BASKETS, CRATES, &c., are charged as low as possible. Half-price will be allowed on them if returned *at once* in *good condition* to MILFORD Station, Carriage paid, and advised by post.

Where practicable, M. Y. would invite an inspection of his Stock, which extends over 100 acres of ground.

Accounts due Midsummer and Christmas. Post-Office Orders payable at Godalming.

Goods can be conveyed, without unloading, to any Station on the principal Railways in England and Scotland by this means much time is gained, besides avoiding a great deal of injury which frequently occurs in unloading and reloading.

Hardy Ornamental Trees, Shrubs, and Evergreens.

Each.
s. d. s. d.

ABELE. *See* Populus.

ABELIA—

UNIFLORA ... — 1 6

A very pretty plant for training on a wall.

ACACIA. *See* also Robinia, page 29.

NEMU ... each 2 6 — 5 0

A new Acacia from Japan, similar in foliage and habit to the Australian species, and having a beautiful rose-coloured blossom; it is said to be perfectly hardy, but has not yet been proved in this country. In favoured situations it will no doubt do well.

ACANTHAPENAX—

HORRIDA VARIEGATA ... — 3 6

A pretty silver-variegated shrub, of dwarf habit, half-hardy, and suitable for pot cultivation as a decorative plant, or for bedding in summer.

ACER (*Maple*)—

COLCHICUM RUBRUM ... — 2 6

A handsome species; the leaves from the beginning of the season till late in the autumn a bright pinkish-purple.

CRISPUM ... — 10 6

A new species from Japan.

DISSECTUM ... — 5 0

——FOLIIS ROSEO-MARGINATUS 3 6 — 7 6

Two shrubby trees, natives of Japan, with small palmate leaves, the former of bright green, the latter having a delicate rose-coloured margin.

ERIOCARPUM (*Sir C. Wager's Maple*) each ... — 1 6

NEGUNDO ... — 1 0

—— VARIEGATUM 1 0 — 2 6

The former a species from North America, height 30 to 40 feet, rich green foliage; the latter a beautiful silver variegated variety, of similar habit, and either, as a single specimen, or planted in groups, is very effective. It may also be used as dwarf plants; and, planted with *Purple Hazel* or *Copper Beech* in masses, forms a most charming bed. It bears cutting well.

PALMATUM ... — 1 6

A small tree from Japan, green palmate foliage, sometimes edged with reddish-brown.

—— RETICULATUM 5 0

A very beautiful variety, the foliage of a bright green, veined with gold.

PALMATIFIDUM 5 0 — 10 6

A most beautiful Japanese species, very finely aud deeply cupped leaves of a bright pale green, very elegant and distinct.

—— ORNATUM 5 0

A very fine variety, with rich dark brown foliage, very handsome.

—— ROSEIS MARGINATIS ... — 31 6

A variety of the above, variegated with red and white margined foliage, a very rare and beautiful plant.

PLATANOIDES (*Norway Maple*) 7 to 8 ft., per 100 30 0 — 50 0
8 to 10ft., ,, 75 0 — 100 0

A fine timber tree, growing from Norway to Switzerland, height 40 to 60ft., leaves turning a clear yellow before dropping, producing a fine autumnal tint. Timber easily worked, and takes a fine polish.

—— AUREO-MARGINATUS 2 6

A fine variety, with gold margined foliage.

		Each.				
		s.	d.		s.	d.
ACER—						
PLATANOIDES VARIEGATA		1	6	—	2	6
A handsome variegated form.						
POLYMORPHUM		3	6	—	5	0
—— **ATROPURPUREUM**		3	6	—	7	6
—— **SANGUINEUM**		5	0			
—— **SEPTEMLOBUM**		5	0	—	10	6
Small Japanese trees, of perhaps 20 feet, deeply-cut palmate leaves, the four varieties of a most beautiful crimson colour in the young shoots and foliage, deepening with age into a rich purple, very effective and desirable.						
PSEUDO-PLATANUS (*Sycamore*)	6 to 8ft. per 100	30	0	—	50	0
—— **LEOPOLDII**		1	6	—	2	6
—— **PURPURASCENS**		1	0	—	1	6
—— —— **VARIEGATA**		...		—	1	6
RUBRUM (*The Red-flowered Maple*)		1	6	—	3	6
A large tree, 30 to 80 feet, from Canada to Florida. Loudon says of this tree.—"The red-flowered maple, whether we regard the beauty of its flowers and opening leaves in early spring, its red fruits in the beginning of summer, or its red foliage in autumn, deserves to be considered one of our most ornamental of hardy trees."						
RUFINERVUM		...		—	21	0
A new species from Japan, fine large foliage, veined and margined with white.						
SACCHARINUM (*Sugar Maple*)		0	9	—	1	6
TARTARICUM GINNALII		...		—	1	6
—— **RUBRUM**	per doz.	6	0	—	9	0
VIRGINICUM RUBRUM	,,	6	0	—	9	0
WAGNERI LACINIATA		...		—	1	6
A very handsome fast-growing tree.						
ACTINIDIA—						
POLYGAMA		...		—	1	6
From Japan.						
ADAM'S NEEDLE. *See* Yucca.						
ÆSCULUS (*Horse Chestnut*)—						
HIPPOCASTANUM (*The Common*)	6 to 8ft., per doz.	12	0	—	18	0
	8 to 10ft., ,,	24	0	—	30	0
—— **FLAVA**, *yellow*	,,	12	0	—	18	0
—— **FLORE PLENO**, *double white*	,,	18	0	—	30	0
—— **HETEROPHYLLA DISSECTA**	,,	18	0	—	30	0
—— **RUBICUNDA**, *scarlet*	,,	18	0	—	30	0
AILANTHUS—						
GLANDULOSUS		1	0	—	1	6
ALEXANDRIAN LAUREL. *See* Ruscus.						
ALNUS (*Alder*)—						
CORDATA (*Neapolitan Alder*)	per doz.	6	0	—	18	0
A fine tree, large heart-shaped leaves of a dark green colour, which are retained for a long period; indeed it is almost an evergreen.						
GLUTINOSA, *common*	8 to 10ft., per doz.	9	0	—	12	0
—— **AUREA**		1	6	—	3	6
Fine yellow foliage in spring and summer.						
—— **IMPERIALIS**		1	6	—	3	6
A variety with deeply-cut foliage.						
—— **LACINIATA**		...		—	1	6
FIRMA		...		—	3	6
JAPONICA		...		—	3	6
Two new species from Japan.						
INCANA	per doz.	6	0	—	9	0
Of more rapid growth than *A. glutinosa*, and makes an ornamental tree.						
—— **LACINIATA** (*cut-leaved*)		...		—	1	6
—— **AUREO-VARIEGATA**		...		—	2	6
VIRIDIS		...		—	2	6

				Each.		
		s.	d.		s.	d.
ALTHÆA—						
FRUTEX, in variety	per doz.	...		—	9	0
—— DOUBLE BLOSSOMED		...		—	1	6
—— —— —— VARIEGATED		...		—	1	6
A silver margined variety of these well-known showy autumn flowering shrubs.						
AMYGDALUS (*Almond*)—						
SINGLE AND DOUBLE		0	9	—	1	6
PINK-LEAVED PEACH (*New*)		...		—	2	6
DOUBLE PEACH		...		—	1	0
ANDROMEDA, in variety	per doz.	9	0	—	18	0
ARALIA—						
SIEBOLDII, or *Fatsia Sieboldii*		1	6	—	5	0
A shrubby growing bush from Japan, having large shining palmate leaves on long foot-stalks arranged in clusters on the tops of the shoots, tolerably hardy, cut only in severe winters; a good plant for either summer or winter decoration on account of its very striking and exotic appearance.						
SPINOSA		1	6	—	2	6
A prickly single stemmed plant with large pinnate leaves.						
ARBORVITÆ. *See* Thuja, Coniferæ.						
ARBUTUS—						
ANDRACHNE		1	6	—	5	0
COMMON	per doz.	6	0	—	12	0
CROOMEII		1	6	—	2	6
MENZIESII		1	6	—	2	6
MILLERI		1	6	—	5	0
PHOTINIAFOLIA		1	6	—	2	6
SCARLET		1	6	—	2	6
ARUNDINARIA—						
FALCATA		...		—	2	6
—— ALBA VARIEGATA		...		—	3	6
—— AUREA VARIEGATA		...		—	3	6
Hardy Bamboo from the Himalayas, particularly handsome.						
ARUNDO—						
CONSPICUA, strong	per doz.	12	0	—	18	0
A recent introduction from New Zealand, in habit and blossom similar to the Pampas Grass; good for cover.						
DONAX (*Italian Reed*)		2	6			
Very handsome, growing 8 to 10 feet.						
—— VARIEGATA		2	6			
MAURITANICA.		2	6			
ASH—						
WEEPING, on straight clear stems, 6 to 8 and 10 feet		2	6	—	5	0
AUCUBA—						
JAPONICA, good young plants	per 100	30	0	—	50	0
—— larger bushes	per doz.	18	0	—	42	0
NEW AUCUBAS, see page 31.						
AZALEA, in variety	per doz.	9	0	—	24	0
FORTUNEI VARIEGATA	per doz.	6	0	—	12	0
A pretty dwarf variegated Bamboo, suitable for edging, growing about a foot high.						
BAMBUSA—						
METAKE		1	6	—	2	6
A fine hardy Bamboo. The *Arundo*, *Arundinaria*, and *Bambusa* are all highly ornamental, either arranged in groups amongst rockery and ferns, or near the edges of water.						
BAY. *See* Laurus.						
BEECH. *See* Fagus.						

		Each.				
		s.	d.		s.	d.
BERBERIS—						
DARWINII	per doz.	4	0	—	12	0
STENOPHYLLA	,,	9	0	—	12	0
See also MAHONIA, for *Bealii*, *japonica*, and *aquifolia*, at page 27.						
BETULA (*Birch*)—						
ALBA (*Silver-Barked Birch*)	per doz.	6	0	—	18	0
—— LACINIATA		1	6	—	2	6
A very handsome cut-leaved variety.						
—— PAPAVERACEA (*Paper Birch*)		1	6			
—— PENDULA YOUNGII, **Young's New Weeping Birch.**		3	6	—	21	0
The ordinary Weeping Birch is generally and deservedly admired as one of the most graceful objects in our English landscapes, so that beyond a brief description of the origin, it is not necessary to say more of the variety than that it is the most beautiful of all Weeping Birches; it was found in this neighbourhood some few years ago trailing on the ground; it was with some difficulty grafted on stems, and now forms fine pendulous heads drooping to the ground in fine thread-like shoots of several feet in length. **See Report in Gardeners' Chronicle, October 14th, 1871, page 1321.** I can now offer fine specimens in standard or pyramidal forms, as well as young plants on stems of various heights from 6 to 10 feet with good heads. As there are other Weeping Birches, it is necessary to ask for *Young's* variety.						
—— LENTA		...		—	1	6
CALIFORNICUM		1	6	—	2	6
A tall rapid growing tree with much larger foliage than the ordinary Birch, and retains it longer.						
BRIAR—						
SWEET	per 100	6	0	—	10	0
BROOM—						
YELLOW SPANISH	per doz.	3	0	—	6	0
WHITE PORTUGAL	,,	3	0	—	6	0
BUXUS (*Box*)—						
EDGING	per yard	...		—	0	6
GOLD-EDGED HANDSWORTH SILVER STRIPED	1 to 1½ft., per 100	...		—	21	0
—— ——	2 to 2½ft.	30	0	—	50	0
MYRTIFOLIA	9 to 12in., per 100	...		—	21	0
NEW BROAD-LEAF	1ft. ,,	...		—	25	0
—— —— LARGER	per doz.	9	0	—	18	0
CALYCANTHUS (*Allspice*)—						
FLORIDUS		...		—	6	0
PRÆCOX (*Chimonanthus fragrans*)		1	6	—	2	6
CARAGANA—						
ARBORESCENS PENDULA (*The Weeping Pea Tree*)		...		—	5	0
CASTANEA (*Spanish Chestnut*)—						
VESCA, *common*	8 to 10ft., per doz.	12	0	—	24	0
—— MARGINATA		2	6	—	7	6
Young's New Silver-Striped, has beautiful silver-marginated leaves; very constant, and does not burn with the sun.						
—— HETEROPHYLLA DISSECTA		...		—	2	6
A very curious variety, having long narrow foliage.						
—— LACINIATA		2	6	—	7	6
Young's New Cut-Leaf, having curiously and deeply serrated foliage.						
—— VIRIDIS MACULATA		...		—	2	6
Has a light green blotch in the centre of a dark green leaf.						
CATALPA—						
SYRINGÆFOLIA	per doz.	9	0	—	18	0
A deciduous tree of North America, large entire cordate leaves, flowers in July and August, with large bunches of white blossoms marked with purple and yellow.						
—— AUREA		2	6	—	10	6
A magnificent new variety having constant gold leaves, very striking.						

		Each. s.	d.		s.	d.
CEANOTHUS—						
AZUREUS	per doz.	9	0	—	12	0
CUNEATUS	,,	6	0	—	12	0
DENTATUS	,,	6	0	—	12	0
RIGIDUS	,,	6	0	—	12	0

These are good plants for trailing against a wall; most of them are thickly covered with small shining leaves, and produce quantities of blue flowers in a variety of shades.

CEDAR. *See* Coniferæ.

		s.	d.		s.	d.
CELTUS (*Nettle Tree*)—						
AUSTRALIS		...		—	1	6
CERCIS—						
SILIQUASTRUM (*Judas Tree*)		...		—	1	6
CERASUS (*Cherry*)—						
DOUBLE BLOSSOM		0	9	—	1	6
—— —— FRENCH		0	9	—	1	6
—— —— CHINESE		0	9	—	1	6
WEEPING		...		—	2	6
—— SINENSIS ROSEUS PENDULA		3	6	—	5	0

A very beautiful Weeping Cherry, its long pendulous shoots being covered with blossoms in early spring.

		s.	d.		s.	d.
CHAMEROPS—						
FORTUNEI (*Chusan Palm*)		2	6	—	7	6

A handsome dwarf Palm from China, hardy in sheltered situations, it is a very effective plant, and can be used as an out-door plant all the summer, and it will be found very useful in the Conservatory, or for furnishing during the winter months.

		s.	d.		s.	d.
CHIMONANTHUS—						
FRAGRANS		1	6	—	2	6
CHIONANTHUS (*Fringe Tree*)—						
VIRGINICUS		...		—	1	6
CISTUS (*Rock Rose*)—						
LADANIFERUS (*Gum*)	per doz.	6	0	—	12	0
CORNUS—						
ALBA (*Scarlet Dogwood*)	per 100	21	0	—	25	0
MASCULA VARIEGATA		1	6	—	2	6
SANGUINEA VARIEGATA		..		—	1	6
SIBERICA ARGENTEA MARGINATA		...		—	2	6
CORYLOPSIS—						
SPICATA		...		—	2	6

A handsome Japanese flowering shrub, leaves pale green, footstalk and young wood reddish; flowers early in Spring with yellowish-white raceme.

		s.	d.		s.	d.
CORYLUS—						
AVELLANA PENDULA (*The Weeping Hazel*)		2	6	—	10	6

A new introduction, and a useful addition to our weeping plants.

		s.	d.		s.	d.
—— PURPUREA (*The Purple Hazel*)	per doz.	12	0	—	18	0
COTONEASTER—						
AFFINIS		0	6	—	1	0
MICROPHYLLA	per 100, 25s. per doz.	4	0	—	6	0

CRAB. *See* Pyrus.

		s.	d.		s.	d.
CRATÆGUS (*Thorn*)—						
DOUBLE and SINGLE SCARLET, DOUBLE WHITE, and 20 other kinds, in variety	per doz.	9	0	—	12	0

CRYPTOMERIA. *See* Coniferæ.

CUPRESSUS. *See* Coniferæ.

Each.

		s.	d.		s.	d.
CYDONIA (*Pyrus japonica*)—						
ALBA		9	0	—	12	0
ROSEA		9	0	—	12	0
DAPHNE—						
CNEORUM		0	9	—	1	6
—— GRANDIFLORA		0	9	—	1	6
DAUPHINE		0	9	—	1	6
ELEGANTISSIMA		2	6	—	5	0
INDICA RUBRA		0	9	—	1	6
JAPONICA		0	9	—	1	6
MEZEREON, red		0	9	—	1	6
—— white		0	9	—	1	6
NEAPOLITANA		0	9	—	1	6
DECIDUOUS CYPRESS. *See* Taxodium, Coniferæ.						
DESFONTAINEA—						
SPINOSA		...		—	1	6
DESMODIUM—						
PENDULIFERUM		...		—	2	6
A most beautiful shrub from Japan, bearing plentifully small bunches of purple pea-shaped flowers on its long pendulous branches. It commences to flower at the end of August, and continues until the frost destroys the bloom.						
DEUTZIA—						
CRENATA FLORE PLENO	per doz.	4	0	—	9	0
GRACILIS	,,	6	0	—	12	0
VARIEGATA	,,	..		—	1	6
SCABRA	,,	6	0	—	12	0
DIERVILLA. *See* Weigelia.						
DIMORPHANTHUS—						
MANDSHURICUS		1	6	—	2	6
A plant having much the same growth and habit as *Aralia spinosa;* a new and highly decorative plant.						
ELM. *See* Ulmus.						
ESCALLONIA—						
MACRANTHA		6	0	—	12	0
An excellent plant for a wall; the foliage is of a deep glossy green, and the flowers, which are produced in great abundance, are of a rich red colour, and very handsome.						
PTEROCLADON	per doz.	6	0	—	12	0
A free-flowering shrub with white blossoms.						
RUBRA	per doz.	6	0	—	12	0
EUGENIA—						
APICULATA		...		—	1	0
UGNI		...		—	1	0
EUONYMUS—						
JAPONICUS	per doz.	9	0	—	12	0
—— ELEGANTISSIMA	,,	9	0	—	12	0
—— MEDIO PICTIS	,,	6	0	—	9	0
—— OVATIS AUREA	,,	6	0	—	12	0
—— STRIATUS	,,	6	0	—	12	0
—— VARIEGATUS	,,	0	9	—	12	0
RADICANS PICTIS	,,	4	0	—	6	0
—— ROSEA MARGINATA	,,	6	0	—	9	0
—— VARIEGATA	,,	3	0	—	9	0
EXOCHORDIA (*Spiræa*)—						
GRANDIFLORA		...		—	1	6
A handsome deciduous shrub, producing abundance of white blossom.						

	Each.				
	s.	d.		s.	d.
FAGUS (*Beech*)—					
FERRUGINEA, fine handsome species	2	6	—	5	0
SYLVATICA, common, 6 to 10ft.	0	9	—	1	6
—— ASPLENIFOLIA (*Fern-leaved*)	...		—	2	6
—— FOLIIS VARIEGATIS	...		—	2	6
—— PURPUREA, purple, 6 to 10ft.	1	6	—	5	0
FORSYTHIA—					
SUSPENSA	...		—	1	0
VIRIDISSIMA	0	9	—	1	0
FURZE—					
DOUBLE-FLOWERING, in pots per doz.	4	0	—	9	0
GARRYA—					
ELLIPTICA	...		—	1	0
GENISTA—					
APHYLLA per doz.	...		—	9	0
PRÆCOX	12	0	—	18	0
A pretty shrub, producing in early spring an abundance of white flowers.					
GUELDER ROSE per doz.	...		—	6	0
GYNERIA—					
ARGENTEA (*Pampas Grass*) per doz.	9	0	—	18	0
—— VARIEGATA	2	6	—	3	0
This highly ornamental plant—a native of South America—is quite hardy, the leaves are very long, and it throws up stems of flowers to the height of several feet.					
HALESIA (*Snowdrop Tree*)—					
TETRAPTERA	...		—	1	6
HIBISCUS SYRIACUS. *See* Althea Frutex.					
HONEYSUCKLE. *See* Climbers.					
HORSE CHESTNUT. *See* Æsculus.					
HYDRANGEA—					
INVOLUCRATA VERA	...		—	2	6
A dwarf hairy-leaved shrub, having umbels of bluish flowers.					
IMPÉRATRICE EUGÉNIE	...		—	1	6
JAPONICA VARIEGATA	...		—	1	0
—— MACROPHYLLA	...		—	1	6
JAPONICA ROSA ALBA	...		—	1	6
This variety flowers in spring and summer; the blossoms are pure white mixed with rosy-red.					
OTAKSA	1	0	—	3	6
The largest flowering of its species, young plants in my nurseries having produced trusses of bloom 20 inches in diameter or 5 feet in circumference; it is of vigorous habit, very fine foliage, and either in the open ground or in the conservatory its large bold blossoms of delicate rosy-pink cannot fail to attract notice. It requires a plentiful supply of moisture; the flowers will then remain fresh for a long time, and will continue blooming until the flowers are destroyed by severe frost.					
PANICULATA GRANDIFLORA	...		—	1	6
A very handsome deciduous shrub, producing freely large conical heads of white blossoms; it remains a long time in flower, and is a most desirable plant.					
STELLATA PROLIFERA	1	6	—	3	6
A dwarf shrub with good foliage, producing freely umbels of double rosy-pink blossoms; a very useful plant for pot cultivation.					
ILEX (*Holly*)—					
ANGUSTIFOLIA MINOR ARGENTEA VARIEGATA	2	6	—	5	0
A small growing variety with serrated silver-margined foliage.					
CAMELLIÆFOLIA	1	6	—	2	6
A very fine variety with rich dark green glossy leaves.					

	Each.			
	s.	d.	s.	d.
ILEX—				
Common Green ...per 100	10	0 —	25	0
—— —— 2, 3, and 4ft. ...per doz.	6	0 —	24	0
—— —— very fine	1	6 —	5	0
CILIATUM	...	—	1	6
CORNUTA	...	—	3	6
CRASSIFOLIA	...	—	1	6
ELLIPTICA	...	—	2	6
FURCATA	...	—	2	6
HODGINSII	1	6 —	3	6
LATIFOLIA	1	6 —	3	6
LATISPINA	1	6 —	3	6
LAURIFOLIUM	1	6 —	3	6
MADERIENSIS	1	6 —	3	6
NOBILIS	1	6 —	3	6
OPACA	1	6 —	3	6
OVATA	1	6 —	3	6
SHEPPARDII	1	6 —	3	6
WEEPING, on fine clear stems	3	6 —	7	6
—— VARIEGATED, **Silver**	3	6 —	21	0
A fine silver-margined Holly, with good weeping habit.				
—— —— **New Golden**	10	6 —	21	0
This is really a handsome weeping plant, having large strong leaves broadly margined with bright gold, equal in colour to our best gold striped Hollies.				
—— —— **Milkmaid**	5	0 —	21	0
Also a new and distinct variety; good weeping habit, having a creamy-coloured blotch in the centre of the leaves.				
VARIEGATED, in many fine varieties, and YELLOW BERRIED, 1½ to 2½ft., per 100	100	0 —	200	0
—— fine specimens, 3, 4, 5, and 6ft.. ... ...each, from	2	6 —	10	6
INDIGOFERA—				
DECORA	...	—	1	0
A very pretty deciduous shrub with delicate Acacia-like foliage, bearing racemes of pink pea-shaped flowers; in a south border or sheltered situation it is perfectly hardy, and if killed down in winter will come up and flower freely again during summer.				
DOSUA MAJOR	...	—	1	0
A much stronger grower than *decora*, with smaller foliage and blossoms; the latter, dark rosy-pink, are much smaller and produced in great abundance, quite hardy, and a very pretty flowering shrub.				
IVY. *See* Climbers.				
JASMINE. *See* Climbers.				
JUGLANS, *Walnut*—				
REGIA, *common*	1	6 —	3	6
—— LACINIATA	3	6 —	7	6
A very fine cut-leaved variety.				
—— PENDULA	5	0 —	10	6
The weeping Walnut, a very handsome plant.				
JUNIPER. *See* Coniferæ.				
KOLREUTERIA—				
PANICULATA	1	6 —	3	6
LABURNUM—				
COMMON	0	9 —	1	6
PURPLE	0	9 —	1	6
LAUREL—				
COMMON, 2 to 3ft. ...per 100	...	—	12	0
—— 3 to 4ft.	20	0 —	50	0
—— larger, 4 to 5ft. ...per 100	75	0 —	100	0
—— CAUCASICUM... ...per doz.	9	0 —	12	0
—— LATIFOLIUM ,,	9	0 —	12	0
—— ROTUNDIFOLIUM ,,	9	0 —	12	0
Three fine foliaged varieties of the Common Laurel.				

		Each.				
		s.	d.		s.	d.
LAUREL—						
PORTUGAL, 1 to 2ft.	per 100	12	6	—	16	0
—— 2 to 3ft.	,,	30	0	—	50	0
—— 3 to 4ft.	per doz.	9	0	—	18	0
—— AZORICUM, an upright compact variety of Portugal Laurel	each	1	0	—	2	6
LAURUSTINUS	per doz.	6	0	—	9	0
EXTRA FINE	,,	12	0	—	18	0
LAURUS—						
NOBILIS (*Sweet Bay*)		1	0	—	1	6
—— extra fine		3	6	—	5	0
LIGUSTRUM, *Privet*—						
CORIACEUM		1	6	—	3	6
A dense growing evergreen shrub from Japan, having particularly dark glossy green foliage of good substance, and thickly set on the branches; a very fine plant.						
JAPONICUM, *Japan Privet*	per doz.	9	0	—	12	0
A fine evergreen shrub, dark shining leaves, large trusses, and white flowers.						
—— TRICOLOR		2	6	—	5	0
A new variety, the foliage of which is margined with creamy-white, the young leaves being also suffused with pink; a very handsome shrub.						
JAPONICUM VARIEGATUM		1	0	—	1	6
A golden variegation.						
LUCIDUM, *Chinese Privet*		...		—	1	6
—— ARGENTEUM VARIEGATUM		...		—	1	6
—— AUREUM		...		—	1	6
Two very handsome kinds of Chinese Privet; foliage margined with gold and silver respectively.						
VULGARE SEMPERVIRENS, *Evergreen Privet*, 2 to 3ft.,	pr 1000	60	0	—	80	0
—— —— strong, 3 to 4ft.	per 100	10	0	—	16	0
—— —— BUXIFOLIUM, *Box-leaved Privet*, 1½ to 2ft.	pr 1000	60	0	—	80	0
—— —— extra strong, 3 to 3½ft.	per 100	25	0	—	30	0
The two latter kinds of Privet are well known as good hedge or cover plants. The Box-leaved Privet is of a more erect habit, and has short thick dark green leaves.						
LILAC. *See* Syringa.						
LIME. *See* TILIA.						
LIQUIDAMBER—						
STYRACIFLUA		1	6	—	3	6
A highly ornamental tree, the foliage turning to a very rich purple, in several shades in autumn.						
LIRIODENDRON (*Tulip Tree*)—						
TULIPIFERA, standards		1	6	—	2	6
LITHOSPERMUM—						
FRUTICOSUM		4	0	—	6	0
A beautiful little creeping plant suitable for rockwork or the edges of borders, producing a quantity of blossoms of the brightest blue.						
MAGNOLIA—						
ACUMINATA		...		—	2	6
CAMPBELLI		10	6	—	42	0
"This is described as being the finest Magnolia known. It is a native of Bhotan and Sikkim, Himalaya, where it makes a forest tree of large size; the flowers are produced in April at the ends of all the shoots, when the tree is still leafless; they vary from white to deep rose colour, or almost crimson, and in size from 6 to 10 inches."—The above description is from a work by Dr. HOOKER. The plant has only been introduced a few years, and is consequently rare in England.						
CORDATA		...		—	2	6
GLAUCA		...		—	1	6
GRACILIS		...		—	1	0

	Each.				
	s.	d.		s.	d.
MAGNOLIA—					
GRANDIFLORA, fine	2	6	—	7	6
—— EXMOUTH, fine	2	6	—	7	6
—— UNDULATA, fine	2	6	—	7	6
PURPUREA per doz.	6	0	—	9	0
SOULANGEANA	2	6	—	5	0
TRIPETALA	...		—	2	6
MAHONIA—					
AQUIFOLIUM 1 ft., per 1000	...		—	60	0
—— 1½ft., ,,	...		—	80	0
—— larger per 100	...		—	10	0
—— FASCICULARIS	...		—	1	6
BEALII and JAPONICA per doz.	12	0	—	30	0
Two large-leaved handsome species from China and Japan; thrive well in the shade.					
MESPILUS (*Snowy Mespilus*)—					
CANADENSIS	...		—	1	0
MOUNTAIN ASH per doz.	3	0	—	6	0
AMERICAN	1	6	—	2	6
WEEPING	...		—	2	6
OLEA—					
ILICIFOLIA, half-hardy	...		—	1	6
OSMANTHUS—					
ILICIFOLIA per doz.	12	0	—	30	0
—— AUREA VARIEGATA	1	6	—	2	6
—— NANA VARIEGATA	1	6	—	2	6
ROTUNDIFLORA	1	6	—	7	6
A new species from Japan, of which I bought the imported plants. It is quite hardy; has dark green leathery leaves, is of good habit, and one of our best hardy evergreen shrubs.					
PÆONIA MOUTAN (*Tree Pæony*)—					
PAPAVERACEA	2	6	—	3	0
ROSEA	2	6	—	3	6
PAULOWNIA—					
IMPERIALIS	...		—	1	6
A spreading deciduous tree from Japan, having large entire leaves, flowers in spring, with panicles of bluish colour.					
PERNETTYA—					
FLORIBUNDA	...		—	1	6
MUCRONATA	...		—	1	0
SPECIOSA	...		...	1	6
PHILADELPHUS (*Mock Orange*)—					
COMMON per doz.	4	0	—	6	0
FLORE PLENO ,,	4	0	—	6	0
GRANDIFLORA ,,	4	0	—	6	0
PHILLYREA—					
OF SORTS	12	0	—	18	0
PLANERA JAPONICA. *See* Ulmus Keaki.					
PLATANUS (*Plane*)—					
OCCIDENTALIS 8 to 10 and 12ft., per doz., 18s.,	24	0	—	42	0
PLATICRATER—					
AGOUTA	...		—	1	6
A new hardy Japanese shrub, producing abundance of pure white flowers.					
POPULUS (*Poplar*)—					
ALBA (*Abele*) 6 to 8ft., per doz.	6	0	—	9	0
—— ARGENTEA 6 to 8ft., ,,	6	0	—	12	0
CANDICANS (*Ontario Poplar*) 6 to 8ft., per 100	40	0	—	60	0
8 to 10ft., ,,	75	0	—	100	0
A rapid growing handsome tree, and thrives well by the sea-side.					

POPULUS—

		Each. s. d.	s. d.
FASTIGIATA (*Lombardy Poplar*)	4 to 5ft., per 100	...	— 25 0
	6 to 8ft., ,,	50 0	— 75 0
	8 to 12ft., per doz.	12 0	— 18 0

This very striking and well known tree deserves to be more extensively planted, our woodlands being for the most part composed of trees of spreading habit. The upright form of the *Lombardy Poplar*, wherever seen, affords a great relief as well as a pleasing object to the eye.

		s. d.	s. d.
LAURIFOLIA		...	— 2 6
LINDLEYANA CRISPA		1 6	— 2 6
MONOLIFERA (*Black Italian Poplar*)	5 to 6ft., per 100	...	— 25 0
	6 to 8ft., ,,	40 0	— 50 0
	8 to 10ft., ,,	75 0	—100 0
	10 to 12ft., ,,	18 0	— 24 0

The most rapid-growing of all the Poplars. The timber is soft, easily worked, and makes good boards for flooring.

PRIVET. *See* Ligustrum.

PRUNUS—

	s. d.	s. d.
SINENSIS FLORE PLENO	1 0	— 1 6
TRILOBA	...	— 1 6

Two beautiful spring-flowering shrubs.

PTEROCARYA—

	s. d.	s. d.
CAUCASICA	...	— 1 6
LÆVIGATA	...	— 1 6

PYRACANTHA—

	s. d.	s. d.
RED AND WHITE	...	— 1 6

PYRUS JAPONICA. *See* Cydonia.

		s. d.	s. d.
MALUS (*Flowering Crab*)		...	— ..
—— BACCATA (*Siberian Crab*)	per doz.	12 0	— 18 0
—— FLORIBUNDA	,,	...	— 18 0
—— PAUL'S IMPERIAL	,,	...	— 18 0
—— RINGO	,,	...	— 18 0
—— SPECTABILIS	,,	12 0	— 18 0
—— —— KAIDO	,,	...	— 18 0
—— TORINGO	,,	...	— 18 0

These may be reckoned amongst the most beautiful of our spring-flowering trees. The *Siberian Crab*, in addition to its blossoms, bears a very handsome small scarlet fruit. *Floribunda* deserves especial notice, as one of the most free-flowering; the buds are of a rich crimson; white when expanded. *Spectabilis* has deep rose-coloured flowers, as have also the other varieties.

QUERCUS (*Oak*)—

		s. d.	s. d.
CERRIS (*Turkey Oak*)	6 to 8ft., per doz.	9 0	— 12 0
—— PENDULA (*Weeping*)		5 0	— 7 6
—— VARIEGATA (*Silver Striped*)		2 6	— 5 0
COCCINEA (*Scarlet Oak*)	per doz.	9 0	— 12 0
FILICIFOLIA		...	— 3 6
ILEX (*Evergreen Oak*)	per doz.	6 0	— 12 0
—— VARIEGATA		...	— 5 0
LAURIFOLIA		2 6	— 7 6

This very fine species of American Oak should be extensively planted, it is of good habit, and has fine entire leaves which are retained for a long time on the tree.

		s. d.	s. d.
PEDUNCULATA (*English Oak*)	5 to 6ft., per 100	25 0	— 30 0
——	8 to 10ft., per doz.	12 0	— 18 0
—— CONCORDIA (*Golden Oak*)		...	— 3 6
—— NIGRA (*Purple Oak*)		...	— 3 6

The *Striped Turkey Oak*, with its silvery margined foliage; the *Scarlet Oak*, with its rich crimson leaves in autumn; the *Golden Oak*, of a bright gold colour during summer; and the rich purple of *Quercus nigra*, render them all valuable as decorative trees in our woodland scenery.

	Each.		
	s. d.		s. d.
RAPHIOLEPIS—			
OVATA	1 0	—	2 6
A Japanese evergreen shrub, having stout foliage, and producing in the ends of each shoot a cluster of white blossoms.			
RHODOTYPUS—			
KERRIOIDES	...	—	1 6
A deciduous shrub from Japan, bearing white flowers in spring.			
RHUS—			
COTINUS (*Venetian Sumach*)	...	—	1 6
GLABRA LACINIATA	1 6	—	2 6
OSBECKII	...	—	2 6
TYPHINA per doz.	9 0	—	12 0
All the species of Rhus are handsome shrubs, or low trees. *Glabra laciniata* is a new variety, especially worthy of notice; its leaves are about 1 foot or 1½ feet in length, and composed of 10 or 12 leaflets, and a terminal one; dark green above, glaucous below, turning rich red in autumn.			
RIBES (*Flowering Currant*)—			
SANGUINEA per doz.	6 0	—	9 0
—— CONSPICUUM ,,	6 0	—	9 0
—— FLORE PLENO ,,	6 0	—	9 0
ROBINIA—			
HISPIDA (*Rose Acacia*)	1 0	—	1 6
PSEUDO-ACACIA (*Common Acacia*) 6 to 10ft. per doz.	6 0	—	12 0
—— —— DECAISNEANA 8 to 10ft. ,,	12 0	—	18 0
—— —— INERMIS (*Mop-headed Acacia*)	...	—	2 6
—— —— PENDULA	...	—	2 6
RUSCUS—			
RACEMOSUS (*Alexandrian Laurel*)	...	—	1 0
SALIX—			
BABYLONICA (*Weeping Willow*), standards	1 6	—	3 0
SAMBUCUS—			
AUREA (*Golden Elder*) per doz.	...	—	12 0
Bright golden foliage, very handsome.			
PYRAMIDALIS	...	—	1 6
SKIMMIA—			
JAPONICA	1 0	—	1 6
OVATA	1 0	—	1 6
Dwarf shining leaved evergreens from China, bearing coral-red berries in winter.			
SNOWDROP TREE. *See* Halesia.			
SOPHORA—			
JAPONICA PENDULA	5 0	—	7 6
A most distinct and highly ornamental weeping tree.			
SPIRÆA—			
OF SORTS per doz.	6 0	—	9 0
SYCAMORE. *See* Acer.			
SYMPHORICARPUS—			
RACEMOSUS (*Snowberry*) per doz.	...	—	4 0
SYRINGA (*Lilac*)—			
PURPLE	6 0	—	12 0
WHITE	6 0	—	12 0
PERSIAN	6 0	—	12 0
SIBERIAN	6 0	—	12 0
JOSIKÆA	6 0	—	12 0
TAXUS. *See* Coniferæ.			
TAXODIUM. *See* Coniferæ.			

		Each.				
		s.	d.		s	d.
TILIA (*Lime*)—						
ALBA PENDULA, standards		5	0	—	7	6
EUROPÆA (*Common Lime*)	4 to 6ft., per 100	50	0	—	80	0
——	6 to 8ft., per doz.	9	0	—	18	0
——	8 to 10ft., ,,	30	0	—	42	0
—— HETEROPHYLLA ROSEA		...		—	1	6
ULMUS (*Elm*)—						
CAMPESTRIS	6 to 8ft., per 100	50	0	—	75	0
—— AUREA		1	6	—	3	6
New Golden Elm, foliage of a deep bronzy-yellow, a very striking ornamental tree.						
—— JERSEY	6 to 8ft., per 100	50	0	—	75	0
—— MEDIO-ARGENTEA		1	6	—		
A very fine foliaged Elm with beautiful silver variegated foliage ; a free grower, very constant, and undoubtedly the finest variegated Elm in cultivation.						
—— VARIEGATA ALBA		1	0	—	1	6
—— CRISPA		1	0	—	1	6
—— MONUMENTALIS		1	0	—	2	6
GLABRA	per doz.	6	0	—	9	0
—— PENDULA		2	6	—	5	0
KEAKI (*Planera japonica*)		1	6	—	5	0
A new Elm from Japan, habit slightly pendulous, long lanceolate leaves ; a very fine variety.						
SUBEROSA PENDULA		...		—	3	6
VIBURNUM—						
TINUS. *See* Laurustinus.						
PLICATUM		...		—	2	6
MACROCEPHALUM		...		—	3	6
The two last are fine new species lately introduced from the North of China, they produce large trusses of white blossoms, similar to an Hydrangea.						
VINCA—						
ELEGANTISSIMA	per doz.	4	0	—	6	0
VIRGILIA—						
LUTEA		...		—	1	6
WEIGELIA—						
AMABILIS	In variety...per doz.	6	0	—	12	0
—— GRŒNWEGII						
—— ISOLINE						
—— STELZNERI						
—— VAN HOUTTII						
HORTENSIS NIVEA						
LAVALLEI, fine dark						
ROSEA						
—— DESBOISII						
—— NANA VARIEGATA						
All the Weigelias are free-flowering deciduous shrubs, bearing bunches of tube-shaped flowers, varying in colour from pure white, as in *hortensis nivea*, to deep rich crimson, in *Lavallei ;* the latter is a new variety, very distinct in colour from all others, and a most desirable shrub.						
WILLOW—						
WEEPING. *See* Salix.						
YEW. *See* Taxus, Coniferæ.						
YUCCA (*Adam's Needle*)—						
ACUMINATA		1	6	—	5	0
FILAMENTOSA		1	6	—	5	0
GLAUCA		1	6	—	5	0
GLORIOSA		1	6	—	5	0
RECURVA		1	6	—	5	0

New Aucubas.

Since the introduction of the Male Aucuba and several new varieties from Japan, great improvements have been made in this most useful Evergreen.

Having paid great attention to their cultivation, I can offer fine plants both of seedlings and varieties at the following low rates :—

		s.	d.
STRONG PLANTS, 9 to 12 in., in eighteen varieties	per doz. 12s. to	18	0
LARGER SIZES, 12 to 18in., and HALF-SPECIMENS, according to size and variety	each from 2s. 6d. to	7	6
STANDARD AUCUBAS, in fruit, full of berries, very handsome for winter and spring decoration	from 10/6 to	21	0

Male Varieties.

- BICOLOR.
- LONGIFOLIA.
- MACULATA.
- MEDIO ARGENTEA.
- OVATA.
- PYGMÆA.
- SULPHUREA.
- VIRIDIS.

Female Varieties.

- ANGUSTIFOLIA.
- AUREA.
- ELEGANS.
- GRANDIDENTATA.

Female Varieties.

- MACULATA.
- HIMALAICA.
- LATIMACULATA.
- LIMBATA, or PICTA.
- LONGIFOLIA.
- DENTATA.
- MACRODONTHA.
- OVATA.
- PICTURATA.
- SULPHUREA.
- VIRIDIS.
- DIŒCIA, having male and female on the same plant.

		s.	d.
Seedlings raised from the above varieties, many of them great improvements..............	per 100, 30s. to	100	0
Specimen Plants	each 2s. 6d. to	7	6
AUCUBA JAPONICA, in fruit (in pots)........................	per doz. 30s. to	60	0
—— —— OVATA, in fruit (in pots)	,, 42s. to	84	0
—— —— —— (on stems)	each 10s. 6d. to	21	0

NOTE.—*All plants here offered are from the open ground, and grown without protection.*

CONIFERÆ, RHODODENDRONS, &c.,

HARDY ORNAMENTAL PLANTS FOR WINTER BEDDING,

CHEAP EVERGREENS FOR COVERTS, &c.,

CLIMBING PLANTS, FRUIT AND FOREST TREES.

A complete Descriptive Catalogue of Coniferæ, Rhododendrons and other American Plants, Roses, Hardy Ornamental Trees, Shrubs, and Evergreens, Plants for Winter Bedding, cheap Evergreens for Coverts and Shrubberies, Climbing Plants, Fruit and Forest Trees, is published every Autumn, and will be forwarded on application.

Plans and Estimates for laying out new, or improving existing Parks and Grounds, prepared and executed.

THE LAWSON COMPANY'S LIST.

No. IV.—FOREST TREES, SHRUBS, &c.] [*November 1874*

1874-75.

THE

LAWSON SEED & NURSERY COMPANY

(LIMITED),

EDINBURGH AND LONDON.

1 GEORGE IV. BRIDGE, EDINBURGH,
AND
106 SOUTHWARK STREET, LONDON, S.E.

NURSERIES—Bangholm, Golden Acre, Wardie, and Windlestrawlee,
EDINBURGH.

TABLE OF CONTENTS.

PAGE

SEEDLING AND TRANSPLANTED CONIFEROUS FOREST TREES 3

SEEDLING AND TRANSPLANTED FOREST TREES 4

FRUIT-TREE STOCKS.. 6

ORNAMENTAL TREES AND SHRUBS *(Coniferæ)*.............................. 6

ORNAMENTAL TREES AND SHRUBS (not *Coniferous)*........................ 11

LIST OF CATALOGUES TO BE HAD 26

PLANTERS' TABLE.. 27

1874-75.

TREES AND SHRUBS.

The Prices are for Orders received prior to the Plants being sold. The higher rates indicate superior quality. Special Estimates given for large quantities.

EXTRA SELECTED PLANTS ARE CHARGED PROPORTIONALLY HIGHER.

Packing Materials are charged at the lowest price, and one-half invoiced value allowed for them if returned immediately after the Plants are unpacked, free of expense, in condition fit for use, and their despatch duly advised.

1. SEEDLING AND TRANSPLANTED CONIFEROUS FOREST TREES.

	Per 1000	
BLACK AUSTRIAN PINE—	s.	d.
1 year seedlings	3	6
2 years seedlings	5	0
1 year seedlings, 1 year transplanted	7	6
2 years seedlings, 1 year transplanted	10	6
4 to 6 inches, twice transplanted	15	0
6 to 12 inches, do.	21	0
12 to 18 inches, do.	35	0
18 to 24 inches, do. ⅌ 100, 21/		
2 to 3 feet, grown singly, — 35/ to 50/		
3 to 4 feet, grown singly ⅌ doz., 12/ to 18/		
4 to 5 feet, grown singly, — 30/ to 42/		
CEMBRA or SWISS STONE PINE—		
12 to 18 in., twice transplanted, ⅌ 100, 15/		
18 to 24 inches transplanted, ⅌ 100, 21/		
2 to 3 feet, several times transplanted (*fine*) ⅌ 100, 50/		
3 to 4 feet, several times transplanted, ⅌ 100, 75/		
4 to 5 feet, several times transplanted, ⅌ doz., 42/		
6 to 8 feet, several times transplanted each, 5/ to 10/6		
CORSICAN PINE (*true*)—		
1 year seedlings (*fine*)	3	6
1 year seedlings, 1 year transplanted	10	6
9 to 12 inches transplanted,	35	0
LARCH, COMMON (*best quality with perfect leaders*)—		
1 year seedlings (*fine*) 2/6 to	3	0
1 year seedlings (*extra superior*)	3	6
2 years seedlings (*very scarce*)	12	6

	Per 1000	
LARCH, COMMON—	s.	d.
1 year seedlings, 1 year transplanted	15	0
2 years seedling, 1 year trans. 17/6 to	21	0
1 year do., 2 years transplanted	25	0
2 years do., 2 years do. 35/ to	40	0
LARCH, TYROLESE—		
1 year seedlings (*fine*) 2/6 to	3	6
2 years seedlings (*scarce*)	12	6
1 year seedlings, 1 year transplanted	15	0
2 years do., 1 year do. 17/6 to	21	0
1 year do., 2 years do. 25/ to	27	6
2 years do., 2 years do.	40	0
MARITIME PINE, FRENCH or PINASTER—		
1 year seedlings	5	0
9 to 15 inches, bedded	15	0
12 to 18 inches, twice transplanted	21	0
MOUNTAIN PINE—		
2 years seedlings	5	0
6 to 9 inches, transplanted	15	0
18 to 24 do., transplanted	25	0
MUGHO PINE—		
2 years seedlings	10	0
2 years seedlings, 2 years transplanted	21	0
18 to 24 inches, transplanted ⅌ doz. 9/		
SCOTS FIR, NATIVE (*true*)—		
1 year seedlings 1/6 to	2	0
2 years seedlings (*fine*)	3	6
1 year seedlings, 1 year bedded	6	0
2 years seedlings, 1 year trans. (*fine*)	10	6
2 years seedlings, 2 years transplanted, 21/ to	25	0
18 to 24 inches, twice trans. (*fine*)	30	0
SILVER FIR, AMERICAN, or BALM of GILEAD—		
12 to 18 inches, trans. ⅌ 100, 15/		
18 to 24 inches, transplanted — 25/		
2 to 3 feet transplanted — 35/		

	Per 1000 s.	d.
SILVER FIR, Common—		
2 years seedlings	7	6
6 to 9 inches transplanted	17	6
9 to 12 inches transplanted	30	0
12 to 18 inches transplanted, 35/ to	40	0
SPRUCE, Norway or Common—		
2 years seedlings 2/6 to	3	6
3 years seedlings (*fine*) 3/6 to	5	0
3 years seedlings, 1 year transplanted	7	6
9 to 12 inches, transplanted	12	6
12 to 18 inches, transplanted	15	0
18 to 24 inches, transplanted	21	0
SPRUCE, Black American—		
2 years seedlings	15	0
3 years seedlings	21	0
6 to 12 inces, transplanted ⅌ 100, 7/6		
12 to 15 in., transplanted — 15/		
2 to 4 feet each, 1/ to 3/6		

	Per 1000 s.	d.
SPRUCE White American—		
1 to 2 feet transplanted 30/ to	40	0
2 to 3 feet each, 1/ to 1/6		
WEYMOUTH PINE—		
2 years seedlings	10	6
1 year seedlings, 2 years transplanted	21	0
2 years seedlings, 2 years transplanted	25	0
2 to 4 feet, thrice transplanted, ⅌ 100, 25/ to 50/		
YEW, Common—		
6 to 9 inches transplanted	75	0
9 to 12 inches transplanted ⅌ 100, 15/		
12 to 18 inches transplanted — 30/		
2 to 3 feet, twice transplanted 75/		
3 to 4 feet, twice transplanted, ⅌ 100, 100/ to 150/		
4 to 5 feet (*fine*) each, 2/6 to	5	0
5 to 7 feet (*fine*) „ 7/6 to	10	6

2. SEEDLING AND TRANSPLANTED FOREST TREES.

See page 3 *for* Coniferous Forest Trees.

	Per 1000 s.	d.
ACACIA, Thorn—		
1 year seedlings	5	0
2 years seedlings	7	6
12 to 18 inches transplanted	25	0
3 to 4 feet transplanted	45	0
6 to 8 ft., twice trans., ⅌ doz., 4/ to 9/		
Fine specimens, 8 to 12 feet, each, 2/6 to 7/6		
ALDER, Common (*Alnus glutinosa*)—		
1 year seedlings	5	0
9 to 15 inches transplanted	15	0
18 to 24 inches transplanted	21	0
2 to 3 feet transplanted	25	0
6 to 10 feet (*fine*), ⅌ doz., 9/ to 12/		
ALDER, Hoary-leaved, (*Alnus incana*)—		
1 year seedlings	7	6
9 to 15 inches transplanted	25	0
18 to 24 inches transplanted	30	0
ASH, Common—		
1 year seedlings (*fine*)	5	0
12 to 18 inches transplanted	10	6
1½ to 2 feet transplanted	15	0
2 to 3 feet transplanted	21	0
6 to 10 feet each 1/ to 5/		
ASH, Mountain—		
1 year seedlings	7	6
18 to 24 inches transplanted	30	0
3 to 4 feet transplanted	40	0
6 to 10 feet (*fine*) each 1/ to 5/		
BEECH, Common—		
1 year seedlings (*fine*) 3/6 to	5	0
12 to 18 inches transplanted	10	6
18 to 24 inches transplanted	17	6
2 to 3 feet transplanted	25	0
3 to 4 feet transplanted	30	0
BIRCH, Common—		
1 year seedlings (*fine*) 3/6 to	5	0
12 to 18 inches	15	0
18 to 24 inches transplanted	21	0

	Per 1000 s.	d.
BIRCH, Common—		
2 to 3 feet transplanted	30	0
4 to 6 feet (*fine*) ⅌ 100, 35/ to 50/		
6 to 10 ft., grown singly, each, 1/ to 2/6		
BIRCH, Weeping—		
1 year seedlings (*fine*) 3/6 to	5	0
2 years seedlings	10	6
12 to 18 inches	17	6
18 to 24 inches transplanted	25	0
2 to 3 feet transplanted	30	0
8 to 12 ft., grown singly, each, 1/6 to 5/		
BRIER, Sweet—		
1 year seedlings 1 year transplanted	7	6
2 to 3 feet transplanted	35	0
BROOM, Common—		
1 year seedlings, 2 years transplanted	21	0
BUCKTHORN, Sea—		
1½ to 2 feet transplanted ⅌ 100, 15/		
CHESTNUT, Horse—		
2 years seedlings	10	6
18 to 24 inches transplanted	25	0
2 to 3 feet transplanted	30	0
4 to 6 feet transplanted	50	0
6 to 10 feet each, 1/ to 5/		
CHESTNUT, Spanish—		
1 year seedlings (*fine*)	12	6
2 years seedlings	15	0
12 to 18 inches	25	0
6 to 8 feet each, 1/ to 1/6		
ELDER, Common—		
12 to 18 inches transplanted	30	0
18 to 24 inches transplanted,	50	0
ELDER, Scarlet Fruited—		
1 to 2 feet transplanted ⅌ 100, 10/		
ELDER, White Fruited—		
1 to 2 feet transplanted ⅌ 100, 10/		
ELM, Wych or Scotch—		
1 year seedlings	5	0
18 to 24 inches transplanted	17	6

	Per 1000	
	s.	*d.*
ELM, Wych or Scotch—		
2 to 3 feet transplanted	21	0
3 to 4 feet transplanted	30	0
8 to 15 feet (*fine*) each, 1/6 to 5/		
ELM, English—		
12 to 18 inches transplanted	17	6
18 to 24 inches transplanted	25	0
2 to 3 feet transplanted	35	0
3 to 5 feet transplanted	50	0
6 to 10 feet (*fine*), each, 1/6 to 10/6		
GEAN TREE or WILD CHERRY—		
See Fruit-Tree Stocks, *page* 6.		
HAZEL—		
2 years seedlings	15	0
1½ to 2 feet transplanted	25	0
HOLLY, Common—		
9 to 12 inches, transplanted, ℘ 100, 21/		
18 to 24 in., twice transplanted — 50/		
2 to 3 feet, twice transplanted — 100/		
4 to 6 feet each, 3/6 to 10/6		
HORNBEAM—		
9 to 15 inches transplanted	12	6
18 to 24 inches transplanted	25	0
2 to 3 feet transplanted	30	0
3 to 4 feet transplanted	35	0
6 to 10 feet each, 1/6 to 5/		
LABURNUM, English—		
2 to 3 feet transplanted	30	0
3 to 5 feet transplanted	50	0
6 to 12 feet each, 1/ to 5/		
LABURNUM, Scotch—		
2 to 3 feet transplanted	30	0
3 to 5 feet transplanted	50	0
6 to 12 feet each, 1/ to 5/		
LIME, Common—		
1½ to 2 feet transplanted ℘ 100, 21/		
2 to 3 feet transplanted — 30/		
3 to 4 feet transplanted — 45/		
4 to 6 feet transplanted — 75/		
6 to 12 feet each, 1/ to 7/6		
MAPLE, English—		
18 to 30 inches transplanted	21	0
3 to 4 feet transplanted	50	0
MAPLE, Norway—		
2 to 3 feet transplanted	30	0
3 to 4 feet transplanted	40	0
6 to 8 feet transplanted ℘ 100, 50/		
8 to 10 feet each, 1/ to 3/6		
OAK, Common or Eng. *Quercus pedunculata*		
1 year seedlings	7	6
18 to 24 inches transplanted	25	0
2 to 3 feet transplanted	30	0
3 to 4 feet transplanted	50	0
5 to 10 feet (*fine*) each, 1/ to 5/		
OAK, Turkey—		
2 years seedlings	10	6
12 to 18 inches transplanted	21	0
2 to 3 feet transplanted	35	0
6 to 12 feet (*fine*) each, 1/6 to 5/		
POPLAR, Balsam—		
2 to 3 feet transplanted	35	0
3 to 4 feet transplanted	50	0
4 to 5 feet transplanted	75	0
6 to 8 feet transplanted, ℘ 100, 50/		
POPLAR, Black Italian—		
18 to 24 inches	30	0
3 to 4 feet transplanted	60	0
6 to 8 feet (*fine*) ℘ 100, 50/		
8 to 10 feet (*fine*) ℘ doz., 12/ to 30/		

	Per 1000	
	s.	*d.*
POPLAR, Lombardy—		
2 to 3 feet transplanted	50	0
4 to 6 feet transplanted ℘ 100, 20/		
6 to 8 feet (*fine*) ℘ doz., 12/		
8 to 12 ft., bushy (*very fine*), each, 2/6 to 5/		
POPLAR, Ontario—		
2 to 3 feet transplanted	50	0
8 to 12 feet each, 1/ to 3/6		
POPLAR, White Egyptian—		
2 to 3 feet transplanted, ℘ 100, 15/		
4 to 6 feet ℘ 100, 20/ to 30/		
PRIVET, Evergreen—		
12 to 18 inches transplanted	15	0
18 to 24 inches transplanted	25	0
2 to 3 feet transplanted	30	0
PRIVET, Box-leaved Evergreen—		
12 to 18 inches transplanted	25	0
18 to 24 inches transplanted	42	0
PRIVET, Oval-leaved—		
12 to 18 inches	50	0
1½ to 2½ feet transplanted	60	0
3 to 4 feet transplanted	75	0
SERVICE TREE—		
12 to 18 inches transplanted, ℘ 100, 10/		
4 to 5 feet transplanted — 30/		
6 to 10 feet (*fine*) each, 1/6 to 5/		
SLOE or BLACK THORN—		
9 to 12 inches transplanted	12	0
18 to 24 inches transplanted	21	6
SYCAMORE or PLANE—		
1 year seedlings (*fine*)	5	0
18 to 24 inches transplanted	21	0
2 to 3 feet transplanted	25	0
3 to 4 feet transplanted	35	0
6 to 8 feet transplanted, ℘ 100, 50		
8 to 12 feet (*fine*) each, 1/ to 7/6		
THORN or QUICK—		
1 year seedlings (*fine*)	3	6
2 years seedlings	5	0
12 to 18 inches transplanted	10	0
18 to 24 inches transplanted	15	0
24 to 36 inches transplanted	21	0
6 to 12 feet each, 1/6 to 10/6		
WALNUT—		
3 to 4 feet transplanted ℘ 100, 30/		
4 to 6 feet transplanted — 42/		
6 to 8 feet each, 1/ to 2/6		
WHIN or GORSE—		
1 year seedlings	7	6
2 years seedlings	10	6
2 feet transplanted	21	0
WILLOW, Bedford—		
1 year cuttings	15	0
2 to 3 feet transplanted	25	0
3 to 5 feet transplanted	35	0
WILLOW, Cane or Basket—		
1 year cuttings	17	6
2 to 3 feet transplanted	25	0
WILLOW, Huntingdon—		
1 year cuttings	15	0
2 to 3 feet transplanted	25	0
6 to 10 feet ℘ 100, 15/ to 30/		
WILLOW, Norfolk—		
1 year cuttings	15	0
3 to 4 feet transplanted	35	0
8 feet twice transplanted, ℘ 100, 15/		
WILLOW, Common Osier—		
1 year cuttings	15	0
1 year transplanted	21	0

	Per 1000 s.	d.
WILLOW, Dutch or Red Osier—		
1 year cuttings	15	0
1 year transplanted	25	0
WILLOW, Yellow Osier—		
1 year cuttings	17	6
1 year transplanted	25	0
WILLOW, Packthread Basket—		
1 year cuttings	30	0

	Per 1000 s.	d.
WILLOW, Purple Basket—		
1 year transplanted	35	0
WILLOW, Red Basket—		
1 year cuttings	17	6
WILLOW—		
various Tree Sorts, named 50/ to	105	0
various Basket Sorts, 1 year cuttings	15	0

3. FRUIT-TREE STOCKS.

	Per 1000 s.	d.
ALMOND—		
2 to 3 feet transplanted ℘ 100, 25/		
APPLE, Crab—		
1 year seedlings (*fine*)	7	6
2 years seedlings	10	6
18 to 24 inches transplanted	30	0
2 to 3 feet transplanted	40	0
APRICOT—		
18 to 24 inches transplanted ℘ 100, 25/		
CHERRY, Common (*Cerasus vulgaris*)—		
1 year seedlings	21	0
2 to 3 feet transplanted	50	0
3 to 4 feet transplanted	75	0
CHERRY, Gean or Wild (*Cerasus sylvestris*)—		
4 to 6 feet ℘ 100, 25/ to 50/		

	Per 1000 s.	d.
CHERRY, Perfumed or Mahaleb (*Cerasus Mahaleb*)—		
1 to 2 feet transplanted	30	0
3 to 4 feet transplanted ℘ 100, 10/6		
6 to 8 feet ℘ doz., 18/ to 30/		
PEACH—		
18 to 24 inches transplanted ℘ 100, 25/		
PEAR, Crab—		
1 year seedlings (*fine*) 7/6 to	10	6
2 to 3 feet transplanted	40	0
PLUM STOCKS, Common—		
1 to 2 feet transplanted	35	0
2 to 3 feet transplanted ℘ 100, 12/6		
SLOE or BLACK THORN. *See page* 5.		
QUINCE, Common—		
2 to 3 feet ℘ 100, 12/6		

4. CONIFEROUS ORNAMENTAL TREES AND SHRUBS.

	Each s.	d.
ABIES, *Don.* (PICEA, *Link.*) Spruce—		
alba. *See* White American Spruce, *page* 4.		
glauca	2	6
Maxwellii	7	6
nana	2	6
variegata	2	6
Albertiana, 9 to 12 inches	1	6
18 to 24 inches	2	6
2 to 3 feet	3	6
4 to 6 feet 5/ to	7	6
Alcoquiana 2/6 to	10	6
Bridgesii, 9 to 12 inches	1	6
Brunoniana 2/6 to	10	6
canadensis, 2 to 3 feet 1/ to	2	6
Douglasii, 6 to 12 inches ℘ 100, 25/		
12 to 18 inches — 75/		
2 to 3 feet 1/6 to	2	6
3 to 4 feet 3/6 to	5	0
4 to 6 feet 3/6 to	7	0
taxifolia 2/6 to	3	6
Englemanii 2/6 to	7	6
excelsa. *See* Norway Spruce, *page* 4.		
archangelica 1/6 to	3	6
aurea variegata 3/6 to	7	6
Clanbrasiliana 1/6 to	3	6
Cranstonii 2/6 to	5	0
echinæformis 1/6 to	3	6
elegans, 9 to 12 inches 2/6 to	3	6

	Each s.	d.
ABIES *Don.* (PICEA, *Link.*) Spruce—		
excelsa Findonensis	2	6
glauca	2	6
gracilis	3	6
Gregoriana 2/6 to	5	0
inverta 3/6 to	7	6
monstrosa, 1 to 2 feet 2/6 to	7	6
mucronata, 9 to 15 inches 2/6 to	5	0
nigra, 1 to 2 feet	1	0
pendula, 18 to 24 inches	2	6
Perthensis	2	6
pygmæa, 6 to 12 inches 2/6 to	3	6
pyramidalis, 4 to 6 inches	1	6
6 to 12 inches	2	6
1½ to 2 feet	3	6
rubra, 1 to 2 feet	1	6
stricta, 4 to 6 inches	2	6
tenuifolia, 9 to 12 inches	3	6
variegata	2	6
firma. *See* Picea bifida, *page* 9.		
Hanburyana	2	6
Hookeriana, 4 to 6 inches	1	6
6 to 9 inches	2	6
12 to 18 inches 3/6 to	5	0
jezoensis 3/6 to	5	0
Maximowiczii	3	6
Menziesii, 18 to 24 inches ℘ doz., 15/		
2 to 3 feet — 21/		
3 to 4 feet 2/6 to	3	6

	Each s.	d.
ABIES, *Don.* (PICEA *Link.*) SPRUCE—		
MENZIESII, 4 to 6 feet 5/ to	10	6
NIGRA. *See* BLACK AMER. SPRUCE, *p.* 4.		
OBOVATA	3	6
ORIENTALIS, 6 to 9 inches	1	0
12 to 18 inches	1	6
18 to 24 inches	2	6
2 to 3 feet 5/ to	7	6
3 to 5 feet 10/6 to	21	0
PATTONIANA, 6 to 9 inches	2	6
9 to 12 inches	3	6
12 to 18 inches 7/6 to	10	6
POLITA 2/6 to	7	6
RUBRA 1/6 to	2	6
SITCHENSIS 2/6 to	5	0
SMITHIANA. (*Syn.*—A. KHUTROW, A. MORINDA, &c.)		
2 to 4 feet 2/6 to	7	6
4 to 6 feet 7/6 to	10	6
6 to 8 feet 12/6 fo	21	0
variegata	3	6
ARAUCARIA, *Jus.*—		
BRASILIENSIS, 15 to 24 inches 3/6 to	7	6
CUNNINGHAMII, 1 to 3 feet 15/ to	42	0
EXCELSA, 1 to 3 feet 10/6 to	42	0
IMBRICATA, 12 to 18 in. ꝑ doz. 24/ to 36/		
18 to 24 inches 3/6 to	7	6
2 to 3 feet 7/6 to	15	0
3 to 4 feet 15/ to	21	0
4 to 8 feet 21/ to	105	0
8 to 10 feet 105/ to	200	0
tenue, 6 to 9 inches	7	6
ARTHROTAXUS, *Don*—		
CUPRESSOIDES 3/6 to	5	0
IMBRICATA 3/6 to	5	0
SELAGINIOIDES 3/6 to	5	0
BIOTA, *Don.* CHINESE ARBORVITÆ. (*See also* THUJA, *page* 11)—		
FORTUNEI 1/6 to	2	6
FLAGELLIFORMIS	2	6
JAPONICA PENDULA	10	6
MELDENSIS, 1 to 2 feet 1/6 to	2	6
ORIENTALIS (*Chinese Arborvitæ*)—		
18 to 24 inches ꝑ doz., 12/		
2 to 4 feet 1/6 to	2	6
4 to 6 feet 3/6 to	5	0
aurea 1/ to	5	0
elegantissima, 6 to 12 inches 1/6 to	3	6
conica, 12 to 18 inches 3/6 to	7	6
18 to 24 inches 7/6 to	10	6
falcata	2	6
freneloides	2	6
globosa, 6 to 12 inches 1/ to	2	6
12 to 18 inches 3/6 to	7	6
glauca, 6 to 9 inches 1/6 to	2	6
gracilis, 12 to 24 inches 1/6 to	2	6
nana, 6 to 12 inches	1	0
nepalensis, 9 to 12 inches	1	0
12 to 18 inches 1/6 to	2	6
picta argentea	2	6
pyramidalis, 6 to 9 inches, ꝑ doz., 6/		
1 to 2 feet	1	0
variegata	2	6
pygmæa, 3 to 6 inches 2/6 to	5	0
Sieboldii, 1 to 3 feet 1/6 to	5	0
tortuosa 1/6 to	2	6
variegata aurea, 1 to 2 feet 1/6 to	3	6
PENDULA, 2 to 4 feet 1/ to	10	6
SEMPER-AURESCENS, *fine* 2/6 to	10	6

	Each s.	d.
BIOTA *Don.* CHINESE ABORVITÆ—		
TATARICA (*Sibirica*), 12 to 18 inches	1	6
18 to 24 inches	2	6
2 to 4 feet 3/6 to	7	6
TRIANGULARIS	2	6
CALLITRIS (*Vent.*) QUADRIVALVIS 1/6 to	3	6
CEDRUS, *Link.* CEDAR—		
ATLANTICA, 18 to 24 inches, ꝑ 100, 75/		
2 to 3 feet 1/ to	1	6
3 to 4 feet 2/6 to	5	0
4 to 6 feet 5/ to	7	6
6 to 10 feet (*fine*) 10/6 to	21	0
DEODARA, 6 to 9 inches ꝑ doz., 12/		
12 to 18 inches — 21/		
18 to 24 inches	3	6
4 to 6 feet 7/6 to	15	0
6 to 10 feet 17/6 to	42	0
crassifolia, 6 to 12 inches 3/6 to	5	0
robusta, 6 to 12 inches 2/6 to	5	0
variegata, 6 to 12 inches	3	6
viridis 3/6 to	5	0
LIBANI, 1 to 2 feet 1/6 to	2	6
3 to 4 feet 3/6 to	5	0
CEPHALOTAXUS, *Sieb.* CHINESE YEW—		
DRUPACEA (*of Gordon*) 1/ to	2	6
FORTUNEI 1/6 to	3	6
HARRINGTONII	1	6
CHAMÆCYPARIS, *Spach.* WHITE CEDAR		
SPHÆROIDEA (*Thujoides*), 9 to 12 in. ꝑ doz. 9/		
12 to 18 inches	1	0
2 to 3 feet 2/6 to	3	6
3 to 4 feet 3/6 to	5	0
viridis	1	0
atrovirens, 12 to 18 inches	1	6
2 to 4 feet 2/6 to	3	6
aurea (*new, fine*)	7	6
glauca, 12 to 18 inches 1/6 to	2	6
2 to 4 feet 3/6 to	5	0
variegata, 12 inches 1/6 to	2	6
THURIFERA 1/6 to	2	6
CRYPTOMERIA, *Don.* CHINESE CEDAR—		
ELEGANS, 6 to 12 inches 1/ to	1	6
12 to 18 inches 2/6 to	3	6
2 to 3 feet 3/6 to	5	0
JAPONICA, 9 to 12 inches, ꝑ doz., 9/		
12 to 18 inches	1	0
2 to 6 feet 1/6 to	7	6
araucarioides, 6 to 12 inches, 2/6 to	3	6
Lobbii, 12 to 18 inches 1/6 to	2	6
2 to 3 feet 3/6 to	7	6
nana, 6 to 12 inches 1/ to	2	6
spirale falcata	5	0
CUNNINGHAMIA SINENSIS, 6 to 12 inches 1/6 to	2	6
CUPRESSUS, *Lind.* CYPRESS—		
CASHMERIANA 1/6 to	2	6
CHINENSIS	2	6
CORNEYANA 1/6 to	3	6
ELEGANS 1/6 to	3	6
EXPANSA	1	6
FRAGRANS, 12 to 18 inches ꝑ doz., 12/		
18 to 24 inches — 18/		
2 to 3 feet — 30/		
3 to 4 feet — 42/		
aurea	3	6
FUNEBRIS, 1 to 2 feet 1/ to	2	6
GOVENIANA, 12 to 18 inches	1	0
18 to 24 inches	1	6

	Each s.	d.
CUPRESSUS, *Lind.* CYPRESS—		
GOVENIANA, 2 to 3 feet 2/6 to	3	6
GRACILIS	2	6
LAMBERTIANA (*true*), 18 to 24 in. 2/6 to	3	6
2 to 3 feet 3/6 to	5	0
LAWSONIANA, 6 to 9 inches (*from seed*) ꝑ 100, 10/6		
9 to 12 in. (*from seed*) — 21/		
12 to 18 in. (*from seed*) — 30/		
18 to 24 inches ꝑ 100, 40/ to 60/		
2 to 3 feet ꝑ 100, 75/		
3 to 4 feet ꝑ doz., 18/ to 30/		
5 to 6 feet 5/ to	10	6
6 to 10 feet 10/6 to	21	0
argentea 1/6 to	7	6
erecta 1/6 to	5	0
lutea 5/ to	10	6
viridis 1/6 to	5	0
glauca 1/6 to	3	6
gracilis 1/6 to	3	6
juniperina 1/6 to	3	6
lutea 5/ to	10	6
nana (*compacta*), 6 to 12 in. 1/ to	2	6
picta argentea 2/6 to	7	6
stricta, 12 to 24 inches 1/ to	2	6
4 to 5 feet (*fine*) 5/ to	10	6
stricta (*Waterer's var.*) 1/6 to	5	0
variegata aurea 2/6 to	7	6
argentea (*new*) 7/6 to	10	6
LINDLEYANA (*Knightiana*), 2 feet 2/6 to	3	6
2 to 3 feet	5	0
LUSITANICA, 2 to 3 feet 2/6 to	5	0
MACNABIANA, 9 to 12 inches	1	0
18 to 30 inches	2	6
MACROCARPA, 12 to 18 inches	1	0
2 to 3 feet	2	6
4 to 6 feet 2/6 to	5	0
NUTKAENSIS (*Thujopsis borealis*), 9 to 12 inches, ꝑ doz., 9/		
12 to 18 inches 1/ to	1	6
2 to 3 feet 2/6 to	3	6
3 to 6 feet 3/6 to	21	0
variegata 3/6 to	5	0
RETROFRACTA 1/ to	5	0
SEMPERVIRENS stricta, 18 to 24 inches 1/ to	5	0
horizontalis, 12 to 15 inches ꝑ doz., 4/		
18 to 24 inches	1	0
STRICTA elegans	1	0
TORULOSA, 9 to 12 inches	1	0
12 to 18 inches	1	6
2 to 3 feet	2	6
nana, 3 to 6 inches 2/6 to	3	6
THUJÆFORMIS, 1 to 2 feet 1/ to	2	6
UHDEANA, 12 to 24 inches	1	6
WHITLEYANA, 1 to 2 feet 1/6 to	3	6
DACRYDIUM, *Soland.*—		
COLENSOI 1/6 to	3	6
CUPRESSINUM 2/6 to	5	0
FRANKLINII 1/ to	2	6
FITZROYA, *Hook.*—		
PATAGONICA, 6 to 12 inches	1	0
15 to 24 inches	1	6
FRENELA AUSTRALIS, *Mirb.*	2	6
GLYPTOSTROBUS SINENSIS	2	6
JUNIPERUS, *Linn.* JUNIPER—		
ATTICA 1/6 to	2	6
BERMUDIANA	2	6
CANADENSIS	1	6

	Each s.	d.
JUNIPERUS, *Linn.* JUNIPER—		
CAUCASICA	1	6
CHINENSIS, 12 to 18 inches 1/ to	1	6
2 to 3 feet 2/6 to	3	6
3 to 4 feet 5/ to	7	6
aurea 5/ to	21	0
argentea variegata 3/6 to	10	6
COMMUNIS, 12 to 18 inches, ꝑ 100, 25/		
arborea, 6 to 9 inches — 12/6		
12 to 18 inches — 30/		
compressa 2/6 to	5	0
hibernica (*Irish Juniper*), 9 to 12 inches ꝑ doz., 6/		
12 to 18 inches	1	0
suecica (*Swedish Juniper*), 6 to 12 inches ꝑ doz., 6/		
CRACOVIA, 12 to 15 inches	1	0
DECUMBENS	1	6
DIŒCIA	1	0
DRUPACEA, 12 to 18 inches	3	6
dumosa 1/6 to	2	6
EXCELSA, 6 to 12 inches	1	6
12 to 24 inches	3	6
stricta 2/6 to	7	6
FRAGRANS	3	6
GOSSAINTHANEA 1/6 to	3	6
HENRYANA 5/ to	10	6
HISPANICA	2	6
HUMILIS	2	6
JAPONICA	1	0
nana, 6 inches	1	0
9 to 12 inches 1/6 to	2	6
MARSHALLII, 12 to 18 inches, 2/6 to	3	6
OBLONGA (*interrupta*)	2	6
pendula 2/6 to	5	0
OXYCEDRUS 1/6 to	3	6
PHŒNICEA, 6 to 12 inches	1	6
Lycia	1	6
PROSTRATA	1	0
PSEUDO-SABINA	1	6
RECURVA 1/ to	3	6
densa 1/6 to	2	6
RELIGIOSA (*Royle*) 2/6 to	5	0
REEVESIANA	1	6
RIGIDA (*Lindley*) 2/6 to	5	0
RUFESCENS, 6 to 12 inches 1/6 to	3	6
SABINA, 9 to 12 inches ꝑ 100, 30/		
variegata 1/ to	2	6
SABINIOIDES 1/ to	3	6
SCHOTTII 1/6 to	2	6
SMITHIANA, 6 to 12 inches	1	6
18 to 24 inches	2	6
pendula	5	0
SPHÆRICA, 12 to 18 inches 1/6 to	2	6
glauca, 6 to 12 inches	2	6
SQUAMATA (*Lambertiana*), 9 to 12 in.	1	0
TAMARISCIFOLIA	1	6
TETRAGONA	1	6
THURIFERA 1/6 to	3	6
TRIPARTITA 1/ to	2	6
VIRGINIANA (*Red Cedar*)—		
12 to 18 inches ꝑ doz., 6/		
2 to 3 feet	1	0
argentea 1/6 to	3	6
aurea 1/6 to	3	6
glauca 1/6 to	5	0
pendula 1/6 to	3	6
viridis 1/6 to	5	0

		Each	
		s.	*d.*
LARIX, *Link.* LARCH—			
AMERICANA rubra	2/6 to	5	0
DAHURICA, 1 to 2 feet	1/6 to	2	6
EUROPÆA. *See* LARCH, *p.* 3.			
pendula, 4 to 6 feet	5/ to	7	6
GIGANTEA		5	0
GRIFFITHII		2	6
LEDEBOURII	2/6 to	5	0
LEPTOLEPIS	3/6 to	5	0
MICROCARPA rubra		2	6
SIBERICA		1	6
LIBOCEDRUS, *Endl.*—			
CHILENSIS, 9 to 12 inches,	1/6 to	2	6
DECURRENS (*Thuja gigantea of some Nurseries*), 12 to 18 in.	1/6 to	2	6
2 to 3 feet	3/6 to	5	0
3 to 6 feet	5/ to	21	0
DONIANA	5/ to	42	0
TETRAGONA	2/6 to	5	0
PHYLLOCLADUS, *Rich.*—			
ASPLENIFOLIUS		2	6
RHOMBOIDALIS		3	6
TRICHOMANOIDES		3	6
PICEA, *Don.* (ABIES, *Link.*) SILVER FIR—			
AMABILIS, (*vera*), 6 to 24 inches (grafts)	3/6 to	21	0
APOLLINIS, 6 to 9 inches		1	6
9 to 12 inches		2	6
BALSAMEA. *See* BALM OF GILEAD, *page* 3.			
variegata		7	6
BIFIDA (*Abies firma*)	2/6 to	10	6
BRACTEATA	2/6 to	7	6
CEPHALONICA, 6 to 9 inches ⅌ doz., 6/			
12 to 15 inches		1	6
2 to 6 feet	5/ to	21	0
CILICICA	2/6 to	3	6
FRASERII, 6 to 9 inches		1	0
12 to 18 inches	1/6 to	2	6
GRANDIS, 9 to 12 inches		3	6
24 to 30 inches	7/6 to	10	6
HUDSONII		2	6
LASIOCARPA, 6 to 9 inches (seedlings)		3	6
12 to 18 inches	5/ to	7	6
2 to 5 feet	10/6 to	42	0
MAGNIFICA, 6 to 9 inches (seedlings)		5	0
12 to 24 inches	7/6 to	21	0
NOBILIS, 1 year seedlings, fine ⅌ 100, 10/			
2 years seedlings — 15/			
6 to 12 inches (*from seed*)	1/ to	1	6
12 to 18 inches	2/6 to	3	6
18 to 24 inches	3/6 to	5	0
2 to 3 feet	7/6 to	10	6
3 to 5 feet	21/ to	42	0
12 to 18 inches (*grafted*)	3/6 to	5	0
glauca	3/6 to	42	0
NORDMANNIANA, 4 to 6 inches (*from seed*) ⅌ doz., 9/			
9 to 18 inches (*from seed*),	1/ to	1	6
2 to 3 feet (*fine*)	3/6 to	7	6
4 to 8 feet	10/ to	42	0
NUMIDICA	2/6 to	5	0
PARSONSII, 6 to 9 inches (*seedlings*)		3	6
PECTINATA (*Common Silver Fir*). *See page* 4.			
pyramidalis	2/6 to	5	0
tenuifolia	2/6 to	5	0
PICHTA, 1 to 2 feet	2/6 to	3	6

		Each	
		s.	*d.*
PICEA, *Don.* (ABIES, *Link.*) SILVER FIR—			
PICHTA affinis		5	0
PINDROW, 6 to 9 inches		1	6
12 to 18 inches		2	6
2 to 3 feet	3/6 to	5	0
PINSAPO, 4 to 6 inches ⅌ doz., 6/			
9 to 12 inches — 12/			
1 to 2 feet	1/6 to	2	6
2 to 3 feet	3/6 to	7	6
3 to 6 feet (*fine*)	10/6 to	42	0
rigida	2/6 to	5	0
variegata		3	6
REGINÆ-AMALLIÆ,	1/6 to	2	6
RELIGIOSA	2/6 to	7	6
WEBBIANA (*seedlings*), 9 to 12 inches		3	6
PINUS, *Linn.* (*True Pine*)—			
ARISTATA	2/6 to	3	6
AUSTRIACA. *See* BLACK AUSTRIAN PINE, *page* 3.			
variegata	2/6 to	5	0
BALFOURIANA		3	6
BANKSIANA,	3/6 to	7	6
BEARDSLEYII	2/6 to	10	6
BENTHAMIANA, 18 to 24 inches (*fine*)		2	6
BERMUJA	2/6 to	3	6
BRUTIA	1/6 to	2	6
BUNGEANA	2/6 to	7	6
CALABRICA		2	6
CEMBRA. *See page* 3.			
nana	2/6 to	5	0
pygmæa	2/6 to	5	0
CONTORTA, 1 to 2 feet	2/6 to	3	6
DENSIFLORA	3/6 to	10	6
EXCELSA, 6 to 12 inches, ⅌ doz., 6/			
12 to 24 inches	1/ to	1	6
6 to 10 feet	7/6 to	21	0
gracilis		3	6
nana		3	6
rigida		3	6
FLEXILIS	3/6 to	7	6
FREMONTIANA. *See* MONOPHYLLA.			
GERARDIANA	2/6 to	10	6
HALEPENSIS		1	0
INSIGNIS, 9 to 12 inches ⅌ 100, 50/			
12 to 18 inches — 75/			
2 to 3 feet	2/6 to	5	0
JEFFREYII, 18 to 24 inches	2/6 to	3	6
KORAIENSIS, 9 to 18 inches	2/6 to	5	0
LAMBERTIANA, 9 to 12 inches	1/6 to	2	6
12 to 18 inches	2/6 to	3	6
2 to 3 feet	5/ to	7	6
LARICIO. *See* CORSICAN PINE, *page* 3.			
Bugotii	2/6 to	3	6
pygmæa	2/6 to	5	0
LEIOPHYLLA	2/6 to	5	0
LLAVEANA	2/6 to	5	0
MACROCARPA (*Coulterii*), 1 to 2 feet		2	6
2 to 3 feet	2/6 to	5	0
MARITIMA. *See page* 3.			
MASSONIANA	2/6 to	7	6
MONOPHYLLA (*Fremontiana*), 6 to 12 inches		2	6
1 to 2 feet	3/6 to	7	6
MONTICOLA, 9 to 12 inches		2	6
2 to 3 feet	3/6 to	7	6
MUGHO. *See page* 3.			
rotundata		1	6
MURICATA, 9 to 12 inches	1/ to	1	6

	Per 100	
PINUS, *Linn.* (*True Pine*)—	s.	d.
MURRAYANA, 6 to 12 inches	3	6
OCAMPII (*Devoniana*) 2/6 to	7	6
PALLASIANA, 1 to 2 feet	1	0
PARVIFLORA, 12 to 18 inches, 3/6 to	5	0
18 to 30 inches 5/ to	7	6
PATULA	2	6
PEUCE, 1 to 2 feet 2/6 to	5	0
PINASTER. *See page* 3.		
PINEA 1/ to	2	6
fragilis	3	6
PONDEROSA, 4 to 6 inches, ꝑ doz. 6/		
1½ to 2 feet 2/6 to	5	0
PUMILIO. *See* MOUNTAIN PINE, *page* 3.		
PYRENAICA, 12 to 18 inches 1/6 to	2	6
18 to 24 inches 2/6 to	3	6
RADIATA, 12 to 18 inches 1/ to	2	6
RIGIDA, 6 to 9 inches ꝑ 100, 25/		
SABINIANA, 6 to 9 inches 1/6 to	2	6
12 to 18 inches 2/6 to	3	6
STROBUS. *See* WEYMOUTH PINE, *page* 4.		
alba 2/6 to	3	6
nivea 2/6 to	3	6
nana 2/6 to	3	6
tabulæformis 2/6 to	3	6
SYLVESTRIS. *See* SCOTS FIR, *page* 3.		
aurea 5/ to	10	6
globosa 1/6 to	2	6
M'Intoshiana 2/6 to	5	0
nana 2/6 to	5	0
pendula 2/6 to	5	0
pumila 2/6 to	3	6
uncinata 2/6 to	3	6
TAURICA 1/6 to	2	6
TUBERCULATA, 2 to 2 feet 2/6 to	3	6
PODOCARPUS, *Heritier*—		
ANDINA	1	6
CHILINI 1/6 to	2	6
DACRYDIOIDES 3/6 to	5	0
JAPONICA 1/6 to	7	6
elegantissima 3/6 to	5	0
MACROPHYLLA aurea	7	6
argentea	10	6
PRUMNOPITYS, *Philippi*—		
ELEGANS 1/6 to	3	6
PSEUDO-LARIX, *Gord.* GOLDEN LARCH—		
KÆMPFERII 5/ to	10	6
RETINOSPORA, *Sieb.*—		
ERICOIDES 1/ to	2	6
FILICOIDES	2	6
FILIFERA 2/6 to	5	0
KETELEERII variegata 5/ to	10	6
LEPTOCLADA 2/6 to	5	0
LYCOPODIOIDES 2/6 to	7	6
OBTUSA, 12 to 18 inches, ꝑ doz., 6/		
18 to 24 inches 1/ to	1	6
2 to 3 feet 2/6 to	3	6
aurea 2/6 to	5	0
nana aurea 2/6 to	5	0
robusta 2/6 to	3	6
pygmæa 2/6 to	5	0
PISIFERA, 6 inches ꝑ doz., 4/		
9 to 12 inches — 6/		
18 to 24 inches 1/ to	1	6
aurea 1/, 2/6 to	7	6
argentea 2/6, 3/6 to	7	6

	Each	
RETINOSPORA, *Sieb.*—	s.	d.
PLUMOSA 2/6 to	7	6
aurea 1/6, 2/6 to	7	6
SQUARROSA, 9 to 12 inches, ꝑ doz., 9/		
1½ to 2 feet 1/ to	1	6
SALISBURIA, *Smith.* MAIDEN HAIR TREE—		
ADIANTIFOLIA, 9 to 12 inches, ꝑ doz., 6/		
12 to 18 inches	1	0
2 to 4 feet 1/6 to	3	6
dissecta	3	6
variegata	5	0
laciniata	3	6
macrophylla incisa	3	6
SAXE-GOTHÆA, *Lindl.*—		
CONSPICUA, 9 to 12 inches, 1/ to	1	6
gracilis, 4 to 9 inches	1	6
SCIADOPITYS VERTICILLATA (*Umbrella Pine*) 3/6 to	10	6
SEQUOIA, *Endl.* (*Taxodium*)—		
ELEGANS 5/ to	7	6
LAWSONIANA 5/ to	10	6
SEMPERVIRENS, 18 to 24 inches	1	0
3 to 5 feet	2	6
WELLINGTONIA, 6 to 9 inches ꝑ doz., 12/		
12 to 18 inches 1/6 to	2	6
18 to 24 inches 2/6 to	3	6
2 to 3 feet 3/6 to	5	0
3 to 4 feet 5/ to	7	6
4 to 6 feet 10/6 to	21	0
6 to 10 feet 21/ to	63	0
variegata 7/6 to	42	0
TAXODIUM, *Rich.* DECIDUOUS CYPRESS—		
DISTICHUM 1/ to	2	6
SEMPERVIRENS (*See* SEQUOIA).		
TAXUS, *Linn.* YEW—		
ADPRESSA, 18 to 24 inches	2	6
variegata 10/6 to	21	0
BACCATA (*Common Yew*). *See page* 4.		
aurantiaca 1/ to	2	6
Barroni fæmina	10	6
brevifolia 1/6 to	2	6
cheshuntensis, 2 to 3 feet 2/6 to	3	6
Daviesii, 1 to 2 feet 1/6 to	2	6
Dovastonii, 9 to 12 inches	1	6
12 to 18 inches	2	6
2 to 3 feet 3/6 to	5	0
Standards 7/6 to	21	0
with leaders 2/6 to	5	0
variegata 5/ to	10	6
elegantissima, 9 to 18 inches 1/6 to	3	6
erecta, 6 to 9 inches	2	6
3 to 4 feet 2/6 to	3	6
4 to 5 feet 3/6 to	5	0
ericoides 2/6 to	5	0
fastigiata (*Irish Yew*) 1 to 2 feet ꝑ doz., 6/ to 9/		
3 to 4 feet 1/6 to	2	6
4 to 5 feet (*fine*) 2/6 to	3	6
5 to 6 feet (*fine*) 5/ to	10	6
7 to 10 feet (*fine*) 12/6 to	21	0
variegata argentea 2/6 to	5	0
aurea 2/6 to	10	6
do., *Fisher Holmes* 2/6 to	21	0
Foxii, 12 inches	1	6

	Each *s.*	*d.*
TAXUS BACCATA—*continued*—		
fructu-luteo, 18 to 24 inches 1/6 to	2	6
2 to 3 feet 2/6 to	3	6
glauca (*Blue John*), 1 to 2 feet	1	6
2 to 3 feet	2	6
4 to 5 feet	5	0
incurva	1	9
Jacksonii, 12 to 18 inches	1	6
latifolia, 2 to 3 feet	5	0
nidpathensis (*Nidpath Castle Yew*),		
12 to 18 inches	1	0
18 to 24 inches	2	6
2 to 4 feet 2/6 to	3	6
recurvata 1/6 to	2	6
sparsifolia	1	6
stricta, 2 to 3 feet	2	6
variegata argentea, 2/6 to	5	0
aurea, 12 to 18 inches 1/6 to	3	6
18 to 24 inches 3/6 to	5	0
Washingtoniana, 1 to 2 feet	1	6
2 to 3 feet	2	6
4 to 5 feet	5	0
Youngii, 1 foot	1	0
CANADENSIS 1/ to	2	0
variegata 2/6 to	7	6
CUSPIDATA 2/6 to	7	6
KORIANA (*T. japonica*), 6 to 9 inches	1	6
12 to 18 inches 2/6 to	5	0
LINDLEYANA, 1 to 2 feet 2/6 to	3	6
2 to 3 feet 3/6 to	5	0
THUJA, *Linn.* ARBORVITÆ. *See* BIOTA, *page* 7.		
CRAIGIANA 1/6 to	3	6
FALCATA	3	6
GIGANTEA (*see Libocedrus decurrens*).		
HOVESII	2	6
MENZIESII (*Lobbii*), 18 to 24 in., ꝑ doz., 9/		
24 to 30 inches — 12/		
3 to 4 feet 1/6 to	2	6
4 to 6 feet 3/6 to	5	0

	Each *s.*	*d.*
THUJA, *Linn.* ARBORVITÆ		
MENZIESII—		
6 to 8 feet 7/6 to	10	6
variegata	2	6
OCCIDENTALIS (*American Arborvitæ*),		
3 to 4 feet ꝑ doz., 9/		
5 to 6 feet 1/ to	3	6
6 to 8 feet 5/ to	7	6
argentea (Queen Victoria)	10	6
compacta, 2 to 3 feet	2	6
Dorkinensis	2	6
ericoides (Elwangerii) 1/ to	5	0
globosa, 2 to 2½ feet 2/6 to	3	6
lutea (George Peabody)	10	6
pendula 1/6 to	2	6
Vervæniana, 12 to 18 inches	1	0
18 to 24 inches 1/6 to	2	6
variegata 2/6 to	5	0
PLICATA (*Warreana*), 12 to 18 inches, ꝑ doz., 6/		
18 to 24 inches — 9/		
2 to 3 feet — 12/		
3 to 4 feet 2/6 to	3	6
THUJOPSIS (*Sieb.*) BOREALIS. *See* CUPRESSUS NUTKAENSIS, *page* 8.		
DOLABRATA 1/6 to	7	6
variegata 1/6 to	7	6
LÆTEVIRENS 1/6 to	5	0
STANDISHII (*Thuja*) 2/6 to	7	6
TORREYA, *Arnott*—		
GRANDIS, 1½ foot	3	6
1½ to 2½ feet 5/ to	10	6
MYRISTICA, 9 to 12 inches	3	6
1 to 2 feet 3/6 to	7	6
NUCIFERA 3/6 to	7	6
TAXIFOLIA 5/ to	10	6
WELLINGTONIA GIGANTEA, *Lindl. See* SEQUOIA, *page* 10.		
WIDDRINGTONIA, *Endl.*—		
CUPRESSOIDES 1/ to	2	6

All Leading Sorts, in Quantity, at Reduced Prices, per doz., 100, and 1000.

Specimen Plants of all the leading Sorts by special bargain.

5. ORNAMENTAL TREES AND SHRUBS.

See page 6 *for* ORNAMENTAL CONIFERÆ.

	Each *s.*	*d.*
ABELIA FLORIBUNDA	1	6
GRANDIFLORA	1	6
UNIFLORA	1	6
ACANTHOPANAX HORRIDUM	3	6
variegatum 5/ to	7	6
ACER (*Maple*) CAMPESTRE. *See* ENGLISH MAPLE, *page*. 5.		
CAMPESTRE austriacum, 2 to 8 feet 6d. to	2	6
barbatum 1/ to	2	6
circinatum 1/6 to	3	6
lævigatum, 2 to 4 feet 6d. to	1	6
maculatum 1/6 to	2	6
variegatum, 1 to 3 feet 1/ to	2	6

	Each *s.*	*d*
ACER (*Maple*). CAMPESTRE—		
COLCHICUM, 2 to 3 feet	1	6
rubrum, 2 to 3 feet	1	6
pyramids, 6 to 8 feet 2/6 to	5	0
CORIACEUM, 1 to 2 feet	1	6
DOUGLASII, 2 to 3 feet 6d. to	1	0
ERIOCARPUM	1	0
HYBRIDUM	1	0
JAPONICUM argenteum 7/6 to	10	6
macranthum	15	0
macrocarpum	7	6
LEOPOLDII 1/6 to	3	6
LOBELII, 2 to 3 feet 1/6 to	2	6

	Each s.	d.
ACER (*Maple*)—		
MACROPHYLLUM, 2 to 4 ft., ⅌ 100, 7/6		
5 to 10 feet 1/6 to	5	0
MONSPESSULANUM, 2 to 4 feet	0	6
6 to 10 feet 1/ to	3	6
MONTANUM, 3 to 4 feet ⅌ doz., 9/		
NEGUNDO. *See* NEGUNDO FRAXINIFOLIA, *p.* 21.		
NEAPOLITANUM (*obtusatum*)	1	6
PLATANOIDES. *See* NORWAY MAPLE, *p.* 5.		
dissectum, 1 to 2 feet 1/6 to	2	6
laciniatum (*Eagle's Claw Maple*), 2 to 4 feet 1/6 to	2	6
occulatum 3/6 to	5	0
Schwelleri	7	6
Sorbergii	15	0
POLYMORPHUM dissectum	10	6
variegatum	10	6
palmatifidum	10	6
palmatum	10	6
purpureum	10	6
variegatum	10	6
PSEUDO-PLATANUS. *See* SYCAMORE, *p.* 5.		
longifolia, 3 to 4 feet	1	0
purpurea, 3 to 4 feet 1/ to	1	6
8 to 12 feet 2/6 to	5	0
variegata aurea (*Corstorphine Plane*), 3 to 4 feet ⅌ doz., 12/		
standards 2/6 to	7	6
argentea, 3 to 4 feet ⅌ doz., 12/		
standards 2/6 to	7	6
splendens 2/6 to	3	6
tricolor	2	6
RUBRUM (*coccineum*), 12 to 18 inches, ⅌ 100, 30/		
3 to 4 feet	1	0
SACCHARINUM, 3 to 5 feet	1	0
SPICATUM (*montanum*), 2 to 3 feet	1	6
SPLENDENS variegata 1/6 to	5	0
STRIATUM, 2 to 4 feet 6d. to	1	6
ACTINIDIA POLYGAMA	3	6
ÆSCULUS (*Horse Chestnut*)—		
HIPPOCASTANUM. *See* HORSE CHESTNUT, *page* 4, and PAVIA, *page* 21.		
carnea 1/ to	2	6
coccinea 1/ to	5	0
crispa 1/ to	2	6
flore pleno alba 1/ to	2	6
rubra 1/ to	2	6
nigra 1/6 to	5	0
præcox 6d. to	1	6
procera 1/ to	2	6
spectabilis 2/6 to	3	6
variegata argentea 1/6 to	3	6
OHIOENSIS, 2 to 4 feet 1/ to	1	6
RUBICUNDA, 1 to 2 feet ⅌ doz., 6/		
2 to 3 feet — 12/		
3 to 5 feet — 18/		
6 to 8 feet 2/6 to	5	0
AILANTHUS GLANDULOSA, 18 to 24 inches ⅌ doz., 4/		
4 to 6 feet 1/6 to	2	6
AKEBIA QUINATA	2	6
ALATERNUS. *See* RHAMNUS, *page* 22.		
ALNUS. *See* ALDER, *page* 4.		
AMERICANA	2	6
argentea	1	6

	Each s.	d.
ALNUS—*continued.*		
AMERICANA barbata	1	6
CORDIFOLIA	1	0
GLUTINOSA asplenifolia	2	6
aurea	3	6
imperialis 1/6 to	3	6
laciniata 1/6 to	2	6
oxyacanthifolia	1	6
quercifolia 6d. to	1	6
sorbifolia	1	6
JAPONICA	5	0
viridis	5	0
AMELANCHIER (*Medlar*)—		
BOTRYAPIUM (*Grape Pear*)	1	0
CANADENSIS	1	6
FLORIBUNDA	1	0
FLORIDA	1	0
LABIFLORA	1	
OVALIFOLIA	1	
SANGUINEA	1	0
SUBCORDATA	1	0
VULGARIS 6d. to	1	6
AMORPHA FRAGRANS	1	0
FRUTICOSA	0	6
AMPELOPSIS (*Virginian Creeper*)—		
BIPINNATA ⅌ doz., 6/		
CORDATA	0	9
HEDERACEA ⅌ doz., 6/		
major	0	9
QUINQUEFOLIA ⅌ doz., 6/		
VEITCHII	1	0
AMYGDALUS (*Almond, &c.*)—		
COMMUNIS 6d. to	2	6
amara	1	0
dulcis	1	0
macrocarpa	1	0
pendula 1/ to	2	6
INCANA	2	6
JASPIDA 1/6 to	2	6
NANA	1	6
PEDUNCULATA 1/6 to	2	6
PERSICA fl. pleno (*Double-flowering Peach*)	1	6
alba 1/6 to	3	6
caryophyllus	2	6
communis	1	6
rosea 1/6 to	3	6
PUMILA (*Cerasus japonica*) alba plena	2	6
rosea plena 1/6 to	2	6
AMYGDALOPSIS LINDLEYII flore pleno (*Prunus triloba*), 2 to 5 feet 1/ to	3	6
ANAGYRIS FÆTIDA 6d. to	1	0
ANDROMEDA ANGUSTIFOLIA	0	6
AXILLARIS	0	6
CATESBÆA	1	0
CALICULATA	0	6
latifolia	0	6
nana	0	6
FLORIBUNDA 1/6 to	5	0
POLIFOLIA	0	6
PULVERULENTA	1	0
SPICATA	0	6
TETRAGONA	1	6
ANNONA TRILOBA	1	0
ARALIA JAPONICA 1/6 to	5	0
SIEBOLDII 1/6, 2/6 to	3	6
variegata 7/6 to	21	0
SPINOSA 1/ to	2	6

	Each	
	s.	d.
ARBUTUS Andrachne	3	6
CALIFORNICA 3/6 to	5	0
Croomii 3/6 to	5	0
HYBRIDA 2/6 to	5	0
Menziesii 2/6 to	5	0
PROCERA 2/6 to	5	0
Rollissonii 3/6 to	7	6
SERRATIFOLIA 3/6 to	7	6
Unedo, 9 to 12 inches ꝑ doz., 6/		
12 to 18 inches — 9/		
fl. pleno	3	6
coccinea 2/6 to	5	0
magnifica 3/6 to	5	0
ARCTOSTAPHYLOS Uva-ursi	1	0
CALIFORNICA	1	0
TOMENTOSA	1	0
ARDISIA JAPONICA viridis	2	6
ARISTOLOCHIA ALTISSIMA	1	0
Kæmpferii	2	6
SEMPERVIRENS	1	0
SIPHO	1	0
TOMENTOSA	1	0
ARISTOTELIA Macqui	1	0
fol. variegatis	1	0
ARONIA procumbens	1	6
ARTEMISIA (*Southernwood*)—		
Abrotanum	0	6
ARBORESCENS	0	9
TOBOLSKIANUM	0	9
ARUNDO (*Bamboo-like Grass*) CONSPICUA 1/6 to	3	6
DONAX variegata 2/6 to	5	0
ASH. *See page* 4, and Fraxinus, *page* 18.		
ASTER CABULICUS	1	0
ASTRAGALUS TRAGACANTHA	1	6
ATRAGENE ALPINA	1	0
fl. albo	1	6
AUCUBA HIMALAYAICA 2/6 to	7	6
macrophylla 2/6 to	5	0
JAPONICA vera 2/6 to	10	6
aurea marginata	2	6
fæmina aurea variegata 2/6 to	7	6
latimaculata 1/6 to	7	6
maculata, *the common variety*, 9 to 12 inches ꝑ 100, 50/		
12 to 15 inches ꝑ 100, 75/		
15 to 18 in., *bushy*, ꝑ 100, 100/ to 150/		
1½ to 3 feet (*fine*), 2/6 to	7	6
pygmæa 2/6 to	7	6
ovata 2/6 to	10	6
mascula 2/6 to	10	6
bicolor 2/6 to	10	6
maculata 2/6 to	10	6
macrophylla 3/6 to	10	6
viridis 2/6 to	10	6
seedlings, 9 to 12 inches ꝑ doz., 18/		
AZALEA AMÆNA, 1 to 2 feet 1/6 to	3	6
PONTICA, 12 to 18 inches ꝑ doz., 9/		
18 to 24 inches — 15/		
2 to 3 feet — 24/		
3 to 4 feet — 30/		
Ghent, *a fine collection of named varieties*, ꝑ doz., 30/ to 42/		
AZARA DENTATA	1	0
BAMBUSA (*Bamboo Cane*)—		
GRACILIS (*Arundinaria falcata*)	1	6

	Each	
	s.	d.
BAMBUSA (*Bamboo Cane*) Metake	2	6
variegata 1/6 to	3	6
BEECH, *See page* 4, and Fagus, *page* 17.		
BENTHAMIA FRAGIFERA 1/ to	2	6
BERBERIDOPSIS CORALLINA	2	6
BERBERIS (*Barberry*). *See* also Mahonia, *page* 20.		
ARISTATA 1/ to	1	6
CANADENSIS, 12 to 18 inches ꝑ 100, 25/		
2 to 3 feet — 50/		
CRATÆGINA, 1 to 2 feet	1	0
Darwinii, 6 to 9 inches ꝑ 100, 15/		
12 to 18 inches — 25/		
18 to 24 inches — 50/		
DULCIS, 1½ to 2 feet — 15/		
EMARGINATA	2	6
EMPETRIFOLIA, 9 to 15 inches ꝑ 100, 50/		
Fortunei	1	6
Hookeriana, 1 to 2 feet	1	6
ILICIFOLIA, 12 to 18 inches	1	0
Jamiesonii, 12 to 18 inches	1	0
Lawsoniana	2	6
Nubertii	1	6
STENOPHYLLA ꝑ 100, 30/		
VULGARIS, 12 to 15 inches — 10/		
18 to 24 inches — 15/		
asperma	0	6
atropurpurea	1	0
aurea-marginata	2	6
laxa	0	6
lutea	0	6
provincialis	0	6
variegata	2	6
violacea	0	6
BETULA ALBA. *See* Birch, *page* 4.		
laciniata pendula 1/6 to	3	6
pendula elegans (*Young's Weeping*) 3/6 to	7	6
urticifolia	1	0
DAURICA	1	6
GRANDIS	1	6
PAPYRACEA	0	6
POPULIFOLIA	0	6
incisa 2/6 to	5	0
ROTUNDIFOLIA	2	6
ULMIFOLIA	2	6
BIGNONIA CAPREOLATA	1	0
GRANDIFLORA	1	0
RADICANS	1	0
BOX. *See* Buxus.		
BRAMBLE. *See* Rubus, *page* 23.		
BRIDGESIA SPICATA	1	6
BROOM. *See* Cytisus and Spartium, *pp.* 16 and 24.		
BROUSSONETIA (*Paper Mulberry*)—		
PAPYRIFERA	1	0
variegata	3	6
BRYANTHUS ERECTUS	1	6
BUDDLEA GLOBOSA	0	6
Lindleyana	1	6
BUPLEURUM FRUTICOSUM	0	6
BUXUS (*Boxwood*) ARBORESCENS Handsworthensis	1	0
BALEARICA 6d. to	2	6
Fortunei	1	0
JAPONICA aurea	1	6
LONGIFOLIA 6d. to	1	6
OBCORDATA	1	0

	Each	
	s.	d.
BUXUS (*Boxwood*), NEPALENSIS	1	0
ROTUNDIFOLIA 6d. to	1	6
SEMPERVIRENS (*Tree Box*) 9 to 12 in. ⅌ doz., 4/		
15 to 18 inches 6/		
3 to 4 feet 1/ to	2	6
4 to 5 feet 3/6 to	5	0
angustifolia aurea	1	6
glauca	1	0
intermedia 6d. to	1	0
marginata aurea, 9 to 12 in. ⅌ doz., 4/		
3 to 4 feet	1	6
4 to 5 feet 1/6 to	5	0
nana (*Dwarf Box for edging*) ⅌ 1000, 7/6		
nova	1	0
pendula 1/ to	1	6
rosmarinifolia 1/ to	2	6
tenuifolia 6d. to	2	6
variegata argentea ⅌ doz., 4/		
12 to 15 inches — 6/		
3 to 4 feet 1/ to	2	6
standards 5/ to	10	6
THYMIFOLIA	1	0
variegata	1	0
CALLUNA VULGARIS (*Heather or Ling*)	0	6
albo aurea	1	0
Alportii	1	0
argentea	1	0
aurea	1	0
fl. pleno	0	6
Foxii	0	6
Hammondii	0	6
minor	0	6
pilosa	0	9
præcox	0	6
rigida	0	9
Serlii	1	0
tenue	0	9
tomentosa	0	6
variegata	0	9
12 distinct varieties ⅌ doz., 6/		
CALOPHACA WOLGARICA	1	6
CALYCANTHUS (*Allspice*) FLORIDUS	1	0
CAPRIFOLIUM (*Honeysuckle*). *See* also LONICERA, *page* 20.		
BRACHYPODA	1	0
aureum reticulatum 6d. to	1	0
DOUGLASII	1	0
ETRUSCUM	1	0
FLAVUM	1	0
FLEXUOSUM	0	6
GRATA	1	0
OCCIDENTALIS	1	0
PERFOLIATUM ⅌ doz., 4/		
PERICLYMENUM — 4/		
Belgicum	0	6
pallidum	1	0
quercifolium	1	0
serotinum	0	6
SEMPERVIRENS major	1	6
coccineum	1	0
minor	1	6
SHEPHERDII	2	6
CARAGANA ALTAGANA 1/ to	2	6
ARBORESCENS, 1 to 2 feet ⅌ 100, 25/		
4 to 6 feet 1/ to	2	6
CHAMLAGU	1	6

	Each	
	s.	d.
CARAGANA GRACILIS pendula 1/6 to	3	6
MACROPHYLLA	1	6
MICROPHYLLA	1	6
REDOWSKII	1	6
SPINOSA	1	0
CARPINUS AMERICANA 1/ to	2	6
BETULUS. *See* HORNBEAM, *p.* 5.		
heterophylla 1/6 to	7	6
incisa 1/6 to	7	6
pendula 1/6 to	5	0
variegata argentea 2/6 to	5	0
aurea 2/6 to	5	0
CARYA (*Hickory Tree*) ALBA	1	0
AMARA	1	0
MACROCARPA	1	0
PORCINA	0	6
TOMENTOSA	1	0
CASTANEA (*Chestnut*) AMERICANA, 2 to 3 feet	1	6
CHRYSOPHYLLA 10/6 to	21	0
VESCA. *See* SPANISH CHESTNUT, *page* 4.		
argentea variegata 2/6 to	5	0
asplenifolia 1/6 to	2	6
aurea variegata 2/6 to	5	0
cochleata 1/6 to	3	6
crispa variegata	5	0
Chataignier a bois jaune	1	6
Bretonne	1	6
Noir	1	6
Downtoniana, 2 to 4 feet	1	6
heterophylla	2	6
laciniata 1/6 to	3	6
lucida, 2 to 6 feet 1/ to	3	6
maculata, 2 to 6 feet 1/6 to	3	6
macrophylla 2/6 to	3	6
maderiensis	2	6
prolifica, 2 to 4 feet 1/6 to	2	6
pyramidalis, 2 to 8 feet 1/6 to	5	0
variegata	3	6
several fruiting Sorts 1/6 to	2	6
CATALPA SYRINGÆFOLIA	1	0
aurea 3/6 to	10	6
KÆMPFERII	2	6
CEANOTHUS AZUREUS	1	6
CRASSIFOLIUS	1	6
DENTATUS	1	6
DIVARICATUS	1	6
GLOIRE DE VERSAILLES	5	0
LEON SIMON	5	0
INTEGERRIMUS	1	6
PAPILLOSUS	1	6
THYRSIFLORUS	1	6
VELUTINUS	1	6
and other varieties	1	6
CELASTRUS SCANDENS	1	0
CELTIS AUSTRALIS	1	0
CORDATA	1	0
GLABRATA	1	0
CEPHALANTHUS OCCIDENTALIS	1	0
CERASUS (*Laurel*) BOREALIS	1	0
CHAMÆCERASUS, Standards	2	6
DEPRESSA	2	6
INTERMEDIA	1	0
JAPONICA	2	6
JULIANA 1/6 to	3	6
pendula 2/6 to	3	6
variegata 2/6 to	5	0

	Each s.	d.
CERASUS (*Laurel*)—		
LAUROCERASUS (*Bay Laurel*), 9 to 12 inches transplanted ꝑ 100, 8/		
12 to 18 inches — 15/		
18 to 24 inches — 30/		
2 to 4 feet ꝑ 100, 35/ to 50/		
caucasica, 12 inches ꝑ doz., 12/		
colchica, 12 inches — 4/		
18 to 24 inches — 9/		
falcata, 9 to 12 inches	1	0
intermedia, 9 to 12 inches 6d. to	1	0
Jeffreyii, 9 to 12 inches	1	0
latifolia or macrophylla 2/6 to	5	0
pygmæa, 6 to 12 inches 6d. to	1	0
rotundifolia, *fine* 6d. to	1	6
variegata, 6 to 12 inches	1	0
LUSITANICA (*Portugal Laurel*), 6 to 9 inches ꝑ 100, 10/6		
9 to 12 inches — 15/		
12 to 18 inches, bushy ꝑ 100, 25/ to 35/		
18 to 24 inches, bushy 40/ to 50/		
24 to 30 inches, bushy 1/ to	2	6
3 to 4 feet, bushy 2/6 to	5	0
4 to 6 feet, bushy 7/6 to	15	0
Standards 5/ to	42	0
azorica 1/ to	2	6
Ormistonensis 1/ to	2	6
variegata 1/6 to	5	0
MAHALEB. *See p.* 6.		
Standards, 5 to 8 feet 1/6 to	5	0
Weeping, 4 to 6 feet 3/6 to	5	0
variegata	2	6
PADUS (*Bird Cherry*), 4 to 6 feet	1	0
aucubæfolia	1	0
bracteosa	1	6
flore pleno	2	6
glaucifolia	1	6
latifolia	2	6
PATTONI	2	6
PSEUDO-CERASUS	1	6
SEROTINA (*Gean*)	1	0
SYLVESTRIS	0	6
flore pleno	1	0
VIRGINIANA	1	0
variegata	5	0
VULGARIS (*Common Cherry*) 6d. to	2	6
flore pleno 1/ to	2	6
Gallica (*French White*) 1/ to	2	6
nicotinæfolia	1	0
semi-pleno 9d. to	2	6
marasca	1	6
variegata (*aucubæfolia*)	2	6
CERCIS (*Judas Tree*) SILIQUASTRUM	0	6
carnea	1	6
variegata	3	6
CESTRUM DIURNUM 1/6 to	2	6
CHENOPODIUM FRUTICOSUM	1	0
CHIMONANTHUS FRAGRANS 1/ to	2	6
GRANDIFLORUS 1/ to	2	6
CHIONANTHUS VIRGINICUS	1	6
CISTUS CRISPUS	1	0
FORMOSUS ꝑ doz., 6/		
LADANIFERUS (*Gum Cistus*)	0	6
LAURIFOLIUS	1	0
LUSITANICUS	1	0
MONSPELIENSIS	1	0
MONTIVIDENSIS	1	0

	Each s.	d.
CISTUS PLATYSEPALUS	1	6
POPULIFOLIUS	1	6
REVOLUTUM	1	0
ROSEUS	1	6
SALVIFOLIUS	1	6
UNDULATUS ꝑ doz., 6/		
CLEMATIS ALBERT VICTOR	1	6
ALEXANDRA	3	6
AZUREA grandiflora	1	0
CIRRHOSA	1	6
FLAMMULA	0	6
FLORIDA	1	0
Standishii	1	6
FRANCOFURTENSIS	2	6
FORTUNEI	2	6
HENDERSONII	0	6
HENRYII	5	0
INSULENSIS	1	6
JACKMANII	1	6
JOHN GOULD VEITCH	2	6
LADY BOVILL	2	6
LADY CAROLINE NEVILLE	3	6
LANUGINOSA	2	6
candida	2	6
LAWSONIANA	3	6
LORD LONDESBOROUGH	2	6
LUCY LEMOINE	2	6
MAGNIFICA	1	6
MONTANA	1	0
MRS JAMES BATEMAN	2	6
OTTO FRŒBEL	2	6
PATENS Amelia	1	6
Helena	1	6
insignis	2	6
monstrosa	2	6
Sophia	1	6
PRINCE OF WALES	1	6
REGINÆ	1	6
RUBELLA	1	6
RUBRO-VIOLACEA	1	6
SIEBOLDII	1	6
STAR OF INDIA	3	6
SYMEIANA	3	6
THE GEM	2	6
THOMAS MOORE	2	6
VELUTINA PURPUREA	2	6
VITALBA	0	6
VITICELLA	0	9
fl. alba	2	6
rubra grandiflora	3	6
venosa	1	6
CLETHRA ALNIFOLIA	1	6
SCABRA	1	6
TOMENTOSA	1	6
CLIANTHUS PUNICEUS	1	6
COCCOLOBA VESPERTILIONIS 1/ to	2	6
COLLETIA FEROX	1	6
SPINOSA	1	0
COLUTEA ARBORESCENS	1	0
SANGUINEA	1	0
COMPTONIA ASPLENIFOLIA	2	6
CORCHORUS JAPONICUS ꝑ doz., 4/		
flore pleno — 4/		
variegatus	1	6
CORIARIA MYRTIFOLIA	1	0
RUSCIFOLIA	1	0
CORNUS (*Dogwood*) ALBA (*Red Barked*), 1½ to 3 feet, ꝑ 100, 25/ to 30/		

	Each	
	s.	d.
CORNUS (*Dogwood*)—		
ALBA sibirica, 1 to 2 feet ℘ doz., 6/		
variegata 2/6 to	3	6
ALTERNIFOLIA ℘ doz., 6/		
CANADENSIS, 1 to 2 feet	0	6
CIRCINATA, 2 feet	1	0
variegata, 1 to 4 feet 1/ to	3	6
PANICULATA, 1 to 2 feet	0	6
SANGUINEA ℘ 100, 25/		
variegata 1/ to	2	6
SERICEA	1	0
CORONILLA EMERUS	0	6
CORYLOPSIS SPICATA	2	6
CORYLUS (*Filbert, &c.*) AVELLANA	0	9
heterophylla, 2 to 3 feet	1	0
pendula	7	6
purpurea, 1/ to	5	0
ROSTRATA	1	6
fruiting sorts, ℘ doz., 6/ to 18/		
COTONEASTER ACUMINATA 6d. to	1	6
AFFINIS 6d. to	1	6
BUXIFOLIA 6d. to	1	6
FRIGIDA 6d. to	1	6
HOOKERIANA	1	6
LANATA	2	6
LAXIFLORA	1	0
MICROPHYLLA ℘ 100, 35/		
compacta ℘ doz., 12/		
spicata ℘ 100, 50/		
NUMMULARIA ℘ doz., 6/ to 12/		
ROTUNDIFOLIA ℘ doz., 4/		
RUPESTRIS — 6/		
SIMONSII, 1 to 2 feet ℘ 100, 25/		
2 to 3 feet ℘ doz., 6/		
THYMIFOLIA ℘ 100, 35/		
TOMENTOSA	1	6
UNIFLORA	1	6
VILLOSA	1	0
VULGARIS	0	6
Standards	2	6
WHEELERII 1/ to	1	6
MASCULA, 2 to 3 feet ℘ 100, 25/ to 35/		
CRATÆGUS (*Hawthorn*) ACERIFOLIA, 3 to 6 feet	1	6
APIIFOLIA, 2 to 5 feet	1	6
ARONIA, 1 to 3 feet	1	6
AZAROLUS	1	6
COCCINEA, 2 feet ℘ doz., 6/		
6 to 8 feet	2	6
4 varieties	1	6
CRASSIFORME	1	6
CRENULATA, in pots 1/ to	2	6
CRUSGALLI	1	0
4 varieties	1	6
DOUGLASII, 3 to 4 feet	1	0
HETEROPHYLLA, 2 to 4 feet	1	0
INTERMEDIA, 3 to 4 ft.	1	0
LAYII	1	6
MACNABIANA, 3 to 4 feet	2	6
MACRANTHA, 4 feet	1	6
MELANOCARPA	1	6
NEAPOLITANA, 4 to 6 feet	1	0
ODORATISSIMA, 3 to 5 feet	1	0
ORIENTALIS, 2 to 4 feet	1	0
OVALIFOLIA, 2 to 3 feet	1	0
OXYACANTHA (*Common Hawthorn*). *See* THORN OR QUICK, *p.* 5.		
coccinea (Syn.—*punicea*) 1/ to	7	6

	Each	
	s.	d.
CRATÆGUS OXYACANTHA, fl. pleno		
coccinea (Paul's) 1/6 to	5	0
eriocarpa	1	6
fructu-coccinea	1	6
lutea	1	6
Guthrieana	2	6
pleno alba 1/ to	5	0
pendula, 6 feet stems 2/6 to	5	0
pentagynia	1	6
quercifolia	1	6
spinosissima	2	6
stricta	1	0
tortuosa	1	0
variegata argentea	1	6
aurea	1	6
PARVIFOLIA	1	6
grossulariæfolia	1	6
PRUNIFOLIA	1	6
PUNCTATA 1/ to	3	6
rubra	1	0
stricta	1	0
PURPUREA	1	6
PYRACANTHA 1/ to	1	6
TANACETIFOLIA	1	6
TOMENTOSA	1	6
50 varieties, 2 of each, ℘ 100, 63/		
25 do., 1 do. — 42/		
CURRANT, FLOWERING. *See* RIBES, *page* 23.		
CYDONIA (*Pyrus*) JAPONICA	1	0
alba	1	6
alba-cincta	1	6
atrosanguinea	1	6
aurora	1	6
candidissima	1	6
fl. pleno	1	0
grandiflora	1	6
Moerloozii	1	6
nivea extus coccinea	1	6
rubra grandflora	1	6
VULGARIS	0	6
and other sorts 1/ to 1/6		
CYTISUS ALPINUS. *See* SCOTCH LABURNUM, *page* 5.		
ALPINUS giganteus 1/ to	1	6
annularis, 4 to 6 feet 1/ to	2	6
hybridus, 3 to 5 feet	1	0
pendulus, 6 to 9 feet 2/6 to	7	6
Parksii, 4 to 6 feet	1	6
Watererii	1	6
LABURNUM. *See* ENGLISH LABURNUM, *p.* 5.		
crispum	1	6
fragrans	0	9
latifolium	1	0
purpureum, 4 to 6 feet	1	6
quercifolium, 2 to 4 feet	1	6
variegatum, 4 to 6 feet	1	6
Weldenii	1	6
ALBUS, 2 to 4 feet ℘ doz., 4/ to 9/		
PURPUREUS	0	6
albiflorus	1	6
atropurpureus	0	6
incarnatus	1	0
SCOPARIUS (*Common Broom*). *See* *p.* 4.		
albus	1	0
pendulus (*standards*) 2/6 to	3	6

	Each	
	s.	d.
DAPHNE CNEORUM 1/ to	1	6
variegata 1/ to	1	6
COLLINA 1/ to	1	6
Dauphinii 1/ to	1	6
Fioniana 1/ to	1	6
Neapolitana 1/ to	1	6
ELEGANTISSIMA	7	6
INDICA 1/ to	3	6
LAUREOLA ℘ doz., 4/ to 9/		
variegata	3	6
MEZEREUM ℘ doz., 4/ to 9/		
atropurpurea 1/ to	2	6
alba	1	0
autumnalis	2	6
ODORATA	1	6
OLEOIDES	1	0
PONTICA 6d. to	1	6
PUBESCENS	1	0
SALICIFOLIA	10	6
DESFONTAINEA SPINOSA 1/ to	2	6
DEUTZIA CORYMBOSA	0	6
CRENATA	1	0
flore pleno 6d. to	2	6
fol. alba marmorata	1	6
GRACILIS 6d. to	2	6
fol. aurea variegata marginata	2	6
SCABRA	1	0
DIERVILLA CANADENSIS	0	6
DIMORPHANTHUS MANDSHURICUS	2	6
DIOSPYROS VIRGINIANA	2	6
DIRCA PALUSTRIS 1/ to	3	6
DOGWOOD. *See* CORNUS, *page* 15.		
ECCREMOCARPUS SCABRA	1	6
EDWARDSIA MACNABIANA	1	6
MICROPHYLLA	1	6
ELÆAGNUS ARGENTEA 6d. to	1	6
ANGUSTIFOLIA	1	0
EDULUS odoratus	1	0
REFLEXA	1	0
variegata 1/ to	2	6
ELDER. *See page* 4, and SAMBUCUS, *page* 24.		
EMPETRUM NIGRUM	0	6
RUBRUM	1	0
SCOTTICUM	1	0
EPIGÆA REPENS	2	6
ERICA (*Heath*) AUSTRALIS 6d. to	1	6
rosea	1	6
CILIARIS 6d. to	1	0
CINEREA	0	4
alba	0	6
rosea	0	6
6 distinct varieties 4d. to	1	0
HERBACEA 4d. to	1	0
carnea 6d. to	1	0
LANCEOLATA	1	0
MACKAYANA 1/ to	1	6
MEDITERRANEA 6d. to	1	0
alba	1	6
hibernica 4d. to	1	0
nana	0	6
SORDIDA	1	0
SPICATA alba	1	0
STRICTA	1	0
TETRALIX	0	4
alba	0	6
mollis	0	9
VAGANS	0	6

	Each	
	s.	d.
ERICA VAGANS alba 4d. to	1	0
grandiflora	1	0
multiflora 4d. to	1	0
rubra	1	0
viridis purpurea	1	0
other Sorts 4d. to	1	0
VULGARIS. *See* CALLUNA, *p.* 14.		
ERIOBOTRYA JAPONICA 1/ to	3	6
ESCALLONIA INGRAMII	1	6
MACRANTHA, ℘ doz., 6/ to 9/ ℘ 100, 35/ to 50/		
ORGANENSIS	1	6
PTEROCLADON	1	0
REVOLUTUM	1	6
RUBRA	1	0
alba	1	6
EUCALYPTUS AMYGDALINA	1	6
EUGENIOIDES	1	6
FISSILLIS	1	6
GLOBOSUS	1	6
OBLIQUA	1	6
PECULARIS	1	6
RESINIFERA	1	6
EUGENIA APICULATA	1	6
MYRTIFOLIA	1	6
UGNI 1/ to	3	6
other Sorts 1/6 to	2	6
EUONYMUS (*Spindle Tree*)—		
ANGUSTIFOLIUS	0	6
EUROPÆUS, 2 to 8 feet 6d. to	3	6
fructu-albo, 1 to 6 feet 9d. to	3	6
nanus, 9 to 12 inches	0	6
JAPONICUS 6d. to	1	6
fol. argenteus	1	6
aureus	1	6
marginatus	1	6
fimbriatus	1	0
LATIFOLIUS	1	6
NANUS	1	0
RADICANS fol. variegatis	2	6
EURYA LATIFOLIA variegata 1/6 to	10	6
EURYBIA ARGOPHYLLA	1	6
GUNNIANA	1	6
ILICIFOLIA	1	6
TOMENTOSA	2	6
FABIANA IMBRICATA 1/ to	2	6
FAGUS (*Beech*) BETULOIDES 3/6 to	10	6
caroliniana, 3 to 5 feet	2	6
ferruginea 1/6 to	3	6
SYLVATICA. *See* COMMON BEECH, *page* 4.		
asplenifolia, 4 to 6 feet 2/6 to	3	6
castaneæfolia	1	6
Comptonæfolia	1	6
cristata, 2 to 6 feet 1/6 to	5	0
cuprea (*Copper Beech*), 2 to 3 feet 1/ to	1	6
3 to 5 feet 1/6 to	2	6
5 to 8 feet 2/6 to	7	6
macrophylla, 3 to 6 feet 1/6 to	5	0
pendula, 6 to 8 feet 2/6 to	10	6
purpurea (*Purple Beech*), 2 to 3 feet	1	0
3 to 4 feet	1	6
4 to 6 feet 2/6 to	3	6
6 to 10 feet 5/ to	42	0
pendula, 6 to 8 feet 3/6 to	21	0
salicifolia, 2 to 4 feet 1/6 to	3	6
quercifolia, 2 to 6 feet 1/ to	3	6

	Each	
	s.	*d.*
FAGUS sylvatica variegata argentea, 2 to 6 feet, 1/6 to	3	6
aurea, 2 to 4 feet,	3	6
FONTANESIA phillyræoides	1	6
FORSYTHIA Fortunei	1	6
suspensa 1/ to	1	6
viridissima 1/ to	1	6
FOTHERGILLA alnifolia, 2 feet	1	6
FRAXINUS acuminata (*Rim* or *Yellow Ash*) 1/ to	1	6
americana	1	0
calabrica	1	0
caroliniana, 3 to 4 feet	1	6
chinensis, 3 to 6 feet	1	6
elliptica, 3 to 6 feet	1	6
excelsior (*Common Ash*). *See p.* 4.		
argentea, 2 to 6 feet	1	6
aurea, 2 to 3 feet ℘ doz., 9/		
3 to 5 feet — 12/ to 18/		
pendula, 6 to 10 feet 5/ to	7	6
aucubæfolia, 4 to 6 feet	1	6
crispa, 2 to 3 feet	1	6
glomerata, 1 to 2 feet	1	6
monstrosa, 3 to 6 feet 1/ to	7	6
pendula, 6 to 12 feet stems 2/6 to	10	6
verticillaris	2	6
nigra	1	0
variegata	1	0
expansa, 3 to 6 feet	1	0
glabra, 3 to 6 feet	1	6
heterophylla, 3 to 6 feet	2	6
hispida, 3 to 4 feet	1	0
integrifolia, 6 to 10 feet 1/6 to	5	0
nigra, 6 to 10 feet 1/6 to	5	0
juglandifolia, 3 to 4 feet	1	6
lentiscifolia, 3 to 6 feet	1	6
pendula, 6 feet stems	7	6
lucida	1	6
lyrata	1	6
monophylla purpurascens	1	6
Ornus (*Flowering Ash*), 1 to 2 feet	1	0
3 to 6 feet 1/ to	2	6
oxycarpa	1	6
oxyphylla	2	6
pallida	1	0
pubescens (*Red Ash*) 6d to	2	6
Richardii	1	6
rufa	2	6
sambucifolia 1/ to	1	6
scolopendrifolia, 3 to 6 feet	1	6
Species from Rocky Mountains	2	6
spectabilis	1	6
viridis, 3 to 6 feet	1	6
FREMONTIA californica 3/6 to	5	0
GARRYA elliptica 1/ to	2	6
Fremontiana	3	6
GAULTHERIA acutifolia	1	6
furens	1	6
procumbens	1	6
Shallon	0	6
GENISTA anglica	0	6
hispanica (*Spanish Whin*)	1	0
horrida	0	6
sagittalis	0	6
tinctoria	0	6
fl. pleno	1	0
GLEDITSCHIA caspica	1	6
horrida	1	6

	Each	
	s.	*d.*
GLEDITSCHIA macrantha	1	0
triacanthos	0	6
inermis	0	6
GLYCINE (*Wistaria*) macrobotrys	5	0
sinensis 1/ to	2	6
alba 1/6 to	3	6
GRISELINIA littoralis	1	0
macrophylla 1/6 to	2	6
GUELDER ROSE. *See* Viburnum, *p* 25.		
GURYA japonica	2	6
GYMNOCLADUS canadensis	1	6
GYNERIUM argenteum 1/6 to	2	6
elegans compacta	2	6
fol. nivea variegata	3	6
HALIMODENDRON argenteum	1	6
HALESIA (*Snowdrop Tree*), tetraptera	1	0
HAMAMELIS virginica	1	6
HEATH. *See* Calluna and Erica, pp. 14 and 17.		
HEDERA Helix (*Common Ivy*), ℘ 100, 12/6		
algeriensis	0	6
variegata	1	6
arborescens 1/ to	1	6
minor lutea	1	0
stricta	1	0
argentea maculata	1	0
betulæfolia	1	0
canariensis	0	9
monophylla	1	0
cænwoodiana	1	0
Cavendishii	1	0
chrysocarpa	0	6
colchica arborea	1	0
conglomerata	2	0
dentata	1	0
digitata (*palmata*)	0	6
donerailensis	0	6
gracilis	0	6
hibernica ℘ 100, 12/6 ℘ 1000, 100/		
variegata	1	0
japonica argentea	1	0
latimaculata ℘ doz., 6/		
marginata arborea	1	6
gracilis	1	0
marmorata	1	0
minuta	1	0
obovata	1	6
poetica	1	0
aurea	1	0
variegata	1	0
rhomboidea	1	0
variegata	1	0
Romana	0	9
sagittalis	1	0
taurica ℘ doz., 6/		
variegata argentea	0	6
aurea	1	0
elegans	1	0
tricolor	1	0
Rœgneriana ℘ doz., 6/		
HELIANTHEMUM (*Rock Rose*)— 12 distinct Sorts ℘ doz., 4/		
HIBISCUS syriacus 1/ to	2	6
named Varieties 1/6 to	3	6
HIPPOPHAE rhamnoides. *See* Sea Buckthorn, *p.* 4.		
angustifolia	1	0

	Each	
	s.	d.
HIPPOPHAE RHAMNOIDES salicifolia	1	6
HOLLY. *See page* 5, and ILEX.		
HONEYSUCKLE. *See* LONICERA, *p.* 20, and CAPRIFOLIUM, *p.* 14.		
HYDRANGEA HORTENSIS 6d. to	1	0
IMPERATRICE Eugénie	1	0
JAPONICA	1	6
variegata argentea	1	6
aurea	1	6
NIVEA	1	0
PANICULATA alba	1	6
grandiflora	1	6
rosea alba	1	6
HYPERICUM ANDROSÆMUM	0	9
CALYCINUM ℔ 100, 25/		
ELATUM	1	0
HIRCINUM	1	0
NEPALENSIS	1	0
ORIENTALIS (*fine*) ℔ 100, 25/		
HYSSOPUS OFFICINALIS	0	6
IDESIA POLYCARPA	3	6
ILEX AQUIFOLIUM (*Common Holly*). *See page* 5.		

SEC. I.—*Leaves Green, and as large or larger than those of the Species,* i.e., *Common Holly.*

	s.	d.
alcicorne, 1 to 2 feet	1	6
3 to 5 feet 3/6 to	10	6
caroliniana, 1 to 3 feet 1/6 to	7	6
Dutch Holly, 2 to 5 feet 1/6 to	7	6
fructu-lutea, 3 to 5 feet 2/6 to	10	6
grandifolium, 1½ to 2 feet 3/6 to	10	6
heterophyllum, 1 to 3 feet 1/6 to	3	6
Hodgensii, 1 to 2 feet 1/ to	2	6
2 to 3 feet 2/6 to	3	6
3 to 6 feet 3/6 to	21	0
hybridum, 2 to 4 feet 1/6 to	5	0
intermedium, 2 to 5 feet 1/6 to	10	6
integrifolium latifolium, 2 to 3 ft., 2/6 to	5	0
lati-spinum, 1 to 2 feet	2	6
latifolium, 1 to 2 feet 1/ to	2	6
laurifolium, 1 to 2 feet 1/ to	2	6
marginatum, 1 to 2 feet	1	0
2 to 4 feet 2/6 to	3	6
4 to 6 feet 5/ to	10	6
nobilis, 1 to 2 feet	1	6
3 to 5 feet 3/6 to	7	6
pendulum, 2 to 4 feet 2/6 to	5	0
4 to 6 feet 5/ to	10	6
platyphyllum, 2 to 4 feet	2	6
rotundifolium 1/ to	7	6
rigidum, 1 to 2 feet	1	6
2 to 5 feet 2/6 to	5	0
Shepherdii, 1 to 2 feet	1	0
2 to 4 feet 2/6 to	3	6
4 to 6 feet 5/ to	10	6

SECT. II.—*Leaves Green, and smaller than those of the Species.*

	s.	d.
aculeatum, 1 to 2 feet	3	6
angustifolium, 1 to 2 feet	2	6
ciliatum majus, 1 to 4 feet 1/6 to	5	0
minus, 1 to 2 feet 1/6 to	2	6
crassifolium, 1 to 3 feet 1/6 to	5	0
crispum, 6 to 12 inches	1	0
1 to 2 feet	1	6
2 to 4 feet 2/6 to	5	0
Donningtonense, 1 to 3 feet 2/6 to	5	0
ILEX AQUIFOLIUM ferox, 1 to 2 feet	1	6
2 to 4 feet	1	6
myrtifolium, 1 to 3 feet 1/6 to	5	0
ovatum, 1 to 2 feet 1/6 to	2	0
recurvum, 1 to 3 feet 1/6 to	3	6
serratifolium, 1 to 2 feet 1/6 to	2	6
Whittingtonensis, 2 to 3 feet 2/6 to	3	6

SECT. III.—*Leaves Blotched, Margined, or Variegated with White.*

	s.	d.
angusti-marginatum, 1 to 3 feet 1/6 to	3	6
ferox argenteum, 1 to 3 feet 1/ to	2	6
Handsworthensis, 1 to 2 feet	5	0
lati-marginatum, 1 to 3 feet 1/ to	3	6
laurifolium argenteum	7	6
marginatum, 1 to 5 feet 1/ to	10	6
pectinata majus, 1 to 3 feet, 2/6 to	5	0
minus, 1 to 2 feet	2	6
pendulum, 1 to 2 feet	2	6
3 to 6 feet 7/6 to	10	6
pictum, 1 to 2 feet 1/6 to	2	6
purpureum, 1 to 3 feet 1/6 to	5	0
quadricolor, 1 to 3 feet 1/6 to	5	0
tricolor, 1 to 3 feet 1/6 to	5	0
viridum, 1 to 4 feet 1/ to	7	6

SECT. IV.—*Leaves Blotched, Margined, or Variegated with Yellow.*

	s.	d.
angustifolium, 1 to 3 feet 1/ to	7	6
angusti-marginatum, 2 to 4 feet 1/6 to	10	6
aurantiaca (*Moonlight*) 1 to 5 feet 1/6 to	10	6
crispum, 1 to 3 feet 1/ to	7	6
ferox aureum, 1 to 2 feet 1/ to	2	6
2 to 4 feet 2/6 to	10	6
heterophyllum, 1 to 4 feet 1/ to	10	6
lati-marginatum, 1 to 2 feet	2	6
laurifolium variegatum aureum	7	6
Lawsoniana 3/6 to	10	6
marginatum, 1 to 3 feet 1/ to	5	0
media-picta variegatum, 2 feet	5	0
nanum (*Waterer's Dwarf*), 1 to 2 feet 2/6 to	7	6
pictum, 1 to 4 feet 1/ to	5	0
Regina (*Queen, Golden*) 1/6 to	21	0
rigidum marginatum, 1 to 3 feet 1/ to	5	0
pictum, 1 to 4 feet 1/ to	5	0

Large specimens by special bargain.

---

	s.	d.
BALEARICA 1/6 to	10	6
nigrescens, 1 to 2 feet 1/ to	2	6
variegata, 1 to 3 feet 2/6 to	5	0
CORNUTA, 1 to 2 feet 1/6 to	2	6
CRENATA (*Fortunei*) 2/6 to	7	6
variegata 1/ to	5	0
CUNNINGHAMII, 2 to 5 feet 3/6 to	5	0
FURCATA, 1 to 2 feet	2	6
LATIFOLIA	5	0
LATISPINA minor	5	0
MACROCARPA, 1 to 3 feet 1/6 to	3	6
MYRTIFOLIA	5	0
OPACA, 1 to 2 feet	2	6
PERADO, 1 to 2 feet	2	6
RIGIDA, 6 to 12 inches	2	6
TURAGO 2/6 to	5	0

---

	s.	d.
WEEPING, of sorts 7/6 to	42	0

---

	s.	d.
INDIGOFERA DOSUA	1	6
FLORIBUNDA	1	6

	Each	
	s.	*d.*
IVY. *See* HEDERA, *page* 18.		
JASMINUM GRANDIFLORUM	2	6
HUMILE	0	6
NUDIFLORUM 6d. to	1	0
variegatum	1	6
OFFICINALE	0	6
variegatum	1	6
REVOLUTUM	0	9
JUGLANS (*Walnut*) CINEREA 1/ to	2	6
MACROPHYLLA	5	0
NIGRA 1/ to	2	6
PRÆPARTURIENSIS, 1 to 4 feet 1/6 to	5	0
REGIA. *See* WALNUT, *page* 5.		
laciniata (*fine*) 2/6 to	7	6
monophylla 5/ to	7	6
pendula 5/ to	10	6
KALMIA ANGUSTIFOLIA	0	6
variegata	1	0
GLAUCA	1	0
LATIFOLIA 1/ to	5	0
MYRTIFOLIA 1/6 to	5	0
rosea	2	6
rubra	2	6
NANA	2	6
KOLREUTERIA PANICULATA 1/ to	2	6
LARDIZABALA BITERNATA	2	6
LAUREOLA AROMATICA	1	6
LAURUS NOBILIS (*Sweet Bay*)—		
6 to 12 inches. ꝑ doz., 6/ to 9/		
12 to 24 inches 1/ to	3	6
Standards in Tubs, 21/ to	150	0
crispa	2	6
salicifolia	2	6
undulata	2	6
LAUREL, ALEXANDRIAN. *See* RUSCUS, *page* 23.		
BAY. *See* CERASUS, *page* 15.		
PORTUGAL. *See* CERASUS, *page* 15.		
LAURESTINUS. *See* VIBURNUM TINUS, *page* 25.		
LAVANDULA SPICA (*Lavender*)	0	6
fl. albo	1	0
LEDUM ANGUSTIFOLIUM	1	0
BUXIFOLIUM	1	0
CANADENSE	1	6
LATIFOLIUM compactum	1	6
LYONIA	1	0
PALUSTRE	1	0
THYMIFOLIUM	1	0
LESPEDESIA MACROCARPA	3	6
LEYCESTERIA formosa ꝑ 100, 15/ to 30/		
LIGUSTRUM (*Privet*) JAPONICUM—		
9 to 12 inches ꝑ doz., 6/		
12 to 18 inches — 12/		
aureum maculatum	2	6
FOL VARIEGATA excelsa	3	6
tricolor	3	6
CORIACEUM 1/6 to	2	6
LUCIDUM	1	6
variegatum	2	6
NEPALENSE	1	6
OVALIFOLIUM, 12 to 18 inches ꝑ 100, 10/	0	6
2 to 3 feet, bushy, ꝑ doz., 4/	0	6
aurea marginatum	2	6
variegatum	2	6
SINENSE 1/ to	2	0

	Each	
	s.	*d.*
LIGUSTRUM VULGARE (*Common Privet*). *See page* 5.		
fl. luteum odoratum	1	0
fructu-luteum ꝑ doz., 6/		
pendulum	2	6
variegatum ꝑ doz., 4/		
superbum „ 9/		
LILAC. *See* SYRINGA, *page* 24.		
LIQUIDAMBAR (*Amber Tree*) IMBERBE	1	0
STYRACIFLUA	1	6
LIRIODENDRON TULIPIFERUM (*Tulip Tree*) 1/ to	5	0
acutifolium	5	0
integrifolium 5/ to	10	6
LONICERA ALPIGENA, 1 to 3 feet	1	0
CÆRULEA	0	6
CONFUSA	1	0
LEDEBOURII ꝑ doz., 6/		
OPPOSITIFOLIA	1	0
TARTARICA ꝑ doz., 6/		
XYLOSTEUM — 6/		
See also CAPRIFOLIUM, *page* 14.		
LYCIUM BARBARUM	0	6
OVATUM	0	9
MACLURA AURANTIACA (*Osage Orange*)	1	0
variegata	2	6
MAGNOLIA ACUMINATA 1/6 to	5	0
CAMPBELLII 21/ to	63	0
CONSPICUA 2/6 to	7	6
Soulangeana 1/6 to	5	0
speciosa	3	6
GLAUCA 1/6 to	5	0
Thomsonii	5	0
GRANDIFLORA 1/6 to	10	6
LENNE 5/ to	7	6
MACROPHYLLA 2/6 to	5	0
PRÆCOX	2	6
PURPUREA	3	6
ROTUNDIFOLIA 1/6 to	3	6
TRIPETALA 1/6 to	2	6
MAHONIA AQUIFOLIUM (*Common Mahonia*), 6 to 12 inches, transplanted, ꝑ 1000, 75/		
12 to 18 inches ꝑ 100, 15/		
18 to 24 inches — 21/		
repens 9d. to	1	0
BEALII 1/6 to	2	6
FASCICULARIS	1	6
FORTUNEI 1/6 to	3	6
GLUMACEA (*nervosa*) 6d. to	1	6
INTERMEDIA 1/ to	1	6
JAPONICA 1/6 to	5	0
LESCHENAULTII 2/6 to	7	6
NEPALENSIS 3/6 to	10	6
MARGYROCARPUS SETOSUS	2	6
MENZIESIA CÆRULEA	1	6
GLOBOSA	1	0
fl. alba	1	0
GLOBULARIS	1	0
POLIFOLIA	0	6
fl. alba	0	6
MESPILUS (*Medlar*) GERMANICA	1	0
other sorts	1	6
MITRARIA COCCINEA 1/ to	1	6
MORUS (*Mulberry*) ALBA 1/6 to	2	6
MORETTIANA	1	0
NIGRA 2/6 to	10	6
RUBRA 1/ to	2	6

	Each	
	s.	d.
MYRICA CERIFERA	0	6
GALE (*Sweet Gale*)	1	0
MYRTUS ANGUSTIFOLIUS	1	0
COMMUNIS 6d. to	7	6
Standards 10/6 to	105	0
LAURIFOLIUS	1	0
THYMIFOLIUS	1	0
NEGUNDO FRAXINIFOLIA (*Ash Maple*), 1 to 3 feet trans., ⅌ 100, 30/		
4 to 10 feet 1/ to	3	6
crispa	1	6
variegata alba 1/ to	5	0
violacea 1/ to	5	0
NEILLIA THYRSIFLORA	1	0
NUTTALIA CERASIFORME	3	0
NYSSA BIFLORA	2	6
GRANDIDENTATA	1	6
VILLOSA	1	6
OLEA (*Olive*) EUROPÆA	1	0
EXCELSA	1	6
ILICIFOLIA 1/6 to	2	6
ONONIS FRUTICOSA	1	0
ROTUNDIFOLIA	1	0
OSMANTHUS ILICIFOLIUS 1/6 to	7	6
VARIEGATUS 1/6 to	7	6
nanus 1/6 to	7	6
aureus 2/6 to	7	6
OSTRYA ALBA	1	6
VIRGINICA	1	6
OXYCOCCOS (*Cranberry*) AMERICANUS	1	0
MACROCARPUS	1	0
PÆONIA MOUTAN (*Tree Pæony*) 1/6 to	3	6
12 distinct varieties 2/6 to	5	0
12 Chinese Sorts 5/ to	10	6
PALIURUS ACULEATUS (*Christ's Thorn*) ⅌ doz., 4/		
PASSIFLORA CÆRULEA	1	6
PAULOWNIA IMPERIALIS 1/ to	3	6
PAVIA (*Smooth-fruited or Buckeye Horse Chestnut*) CALIFORNICA	1	0
CANADENSIS, 3 feet	1	0
COCCINEA, 3 to 4 feet	1	6
DISCOLOR, 3 feet	1	0
DUBIA, 4 to 6 feet	1	6
FLAVA, 3 feet	1	0
GRACILIS	1	6
LYONII 1/ to	2	6
NEGLECTA, 3 to 8 feet 1/ to	3	6
RUBRA, 3 to 4 feet 1/ to	1	6
rosea, 3 to 4 feet 1/ to	3	6
SPICATA 1/ to	2	6
PERIPLOCA GRÆCA	1	0
PERIWINKLE. *See* VINCA, *page* 25.		
PERNETTYA ANGUSTIFOLIA	1	0
CANDIDA	2	6
FLORIBUNDA	1	0
MICROPHYLLA	1	0
MUCRONATA ⅌ doz., 4/		
PILOSA	1	6
SPECIOSA ⅌ doz., 6/		
PHILADELPHUS CORONARIUS 6d. to	1	0
flore pleno, 1 to 3 feet 6d. to	1	0
variegatus, 1 to 2 feet 1/ to	1	6
FLORIBUNDUS	1	0
GRACILIS 6d. to	1	0
GORDONIANUS 6d. to	1	0
GRANDIFLORUS	1	0
INODORUS 6d. to	1	6

	Each	
	s.	d.
PHILADELPHUS SPECIOSUS	0	9
PHILESIA BUXIFOLIA 2/6 to	5	0
PHILODENDRON AMURENSE	5	0
PHILLYREA ANGUSTIFOLIA 6d. to	2	9
LATIFOLIA 6d. to	3	6
LIGUSTRIFOLIA 1/ to	2	6
MEDIA 6d. to	3	6
buxifolia 1/ to	3	6
OLEÆFOLIA 1/ to	3	6
PHLOMIS FRUTICOSA	0	9
PHORMIUM TENAX (*New Zealand Flax*) 1/6 to	5	0
VARIEGATA 63/ to	600	0
VEITCHII 42/ to	63	0
PHOTINIA GLABRA	1	0
SERRULATA	1	0
PIPTANTHUS NEPALENSIS	1	0
PISTACIA VERA	1	6
PITTOSPORUM CORNIFOLIA	1	6
MAYII, 6 to 12 inches	2	6
TENUIFOLIA	1	6
TOBIRA, 6 to 12 inches	1	0
variegata 1/ to	2	6
UGENIOIDES	1	6
PLANERA RICHARDII 1/6 to	2	6
PLATANUS (*Plane*) NEPALENSIS, 3 feet	2	6
OCCIDENTALIS (*Western Plane*), 2 to 6 feet, 6d. to	2	6
variegata	5	0
ORIENTALIS (*Oriental Plane*), 2 to 6 feet, 6d. to	2	6
acerifolia, 1½ to 6 feet 1/ to	2	6
cuneata, 1 to 2 feet 1/ to	1	6
POLYGALA CHAMÆBUXUS	1	0
POPULUS (*Poplar*). *See page* 5.		
ALBA (*Abele*), 2 to 3 feet ⅌ 100, 35/		
3 to 5 feet — 60/		
6 to 8 feet 1/ to	3	6
acerifolia 1/ to	2	6
BALSAMIFERA suaveolens 1/ to	2	6
CANADENSIS	1	0
CANDICANS variegata	1	6
CANESCENS	1	6
CORDIFOLIA	1	0
GRÆCA	1	0
HUDSONII	1	0
LAURIFOLIA 6d. to	1	6
LINDLEYANA	1	0
incana	1	0
MACROPHYLLA variegata 2/6 to	5	0
SALICIFOLIA	1	0
TREMULA (*Aspen*)	1	6
pendula 3/6 to	10	6
POTENTILLA FLORIBUNDA	0	6
FRUTICOSA	0	6
GLABRA	2	6
PRINOS GLABER	2	6
PRUNIFOLIUS	1	0
VERTICILLATUS	0	9
PRUNUS (*Plum*) BRIGANTIACA	1	0
CALIFORNICA	1	0
DOMESTICA. *See* FRUIT TREE CATALOGUE.		
flore pleno	2	6
variegata aurea	1	6
INSTITIA (*Bullace Plum*) 1/ to	2	6
MYROBOLANA (*Cherry Plum*)	1	6
SINENSIS flore albo pleno	1	6
SPINOSA flore pleno (*Double Sloe*) 1/6 to	3	6

		Each	
		s.	d.
PRUNUS TRILOBA. *See* AMYGDALOPSIS LINDLEYII, *p.* 12.			
PTELEA TRIFOLIATA	6d. to	2	6
variegata	1/6 to	2	6
PTEROCARYA CAUCASICA	1/6 to	5	0
PTEROSTYRAX HISPIDUM		5	0
PUNICA (*Pomegranate*) GRANATUM	9d. to	5	0
LEGRELLII	3/6 to	5	0
PYRUS ACERIFOLIA, 2 to 3 feet		1	6
5 to 8 feet		2	6
AMERICANA	1/6 to	3	6
fastigiata, 3 to 4 feet		1	6
fl. albo pleno		2	6
fl. rubro pleno		2	6
ARIA (*Service or White Beam*). *See p.* 5.			
latifolia, 2 to 6 feet	1/ to	2	6
nivea, 3 to 6 feet	1/ to	2	6
undulata, 3 feet		1	6
AMYGDALIFORMIS, 3 to 8 feet.	1/6 to	3	6
ASTRACANICA fastigiata, 2 to 4 feet		1	0
AUCUPARIA (*Mountain Ash*). *See page* 4.			
fastigiata, 4 to 6 feet	1/ to	3	6
fructu-lutea, 2 to 3 feet	1/ to	3	6
pendula, 6 to 10 feet stems,	2/6 to	7	6
variegata		5	0
BACCATA (*Siberian Crab*) 2 to 6 feet	1/ to	2	6
aurea		1	0
maxima		2	6
rubra		2	6
BOLLWYLLERIANA, 2 to 5 feet.	1/ to	2	6
CAROLINIANA		2	6
COMMUNIS (*Pear*) fl. pleno	1/ to	2	6
angustifolia		1	0
variegata, 2 to 4 feet	1/6 to	2	6
fructu-variegata	1/ to	1	6
jaspida, 2 to 4 feet	1/ to	1	6
fruiting sorts. *See* FRUIT TREES.			
CORONARIA, 2 to 4 feet	1/ to	2	6
ELÆAGNIFOLIA, 3 to 6 feet	1/ to	2	6
FLORIBUNDA, 2 to 4 feet	1/ to	1	6
HETEROPHYLLA, 2 to 6 feet	1/6 to	3	6
INTERMEDIA, 3 to 6 feet	6d. to	1	6
KUDU		1	6
LANUGINOSA, 3 to 6 feet	1/6 to	3	6
MALUS (*Apple*) fol. argenteis		3	6
aurea nervosa, 2 to 4 feet		1	0
argentea marginata, 2 to 3 feet		3	6
jaspida		2	6
spectabilis		1	6
MAULEI (new Japan apple)	21/ to	31	6
NEPALENSIS, 2 to 4 feet	1/ to	1	6
PINNATIFIDA, 2 to 8 feet	1/ to	2	6
arbuscula, 3 to 6 feet	1/ to	3	6
PRUNIFOLIA, 3 to 6 feet	1/ to	1	6
coccinea, 2 to 8 feet	1/ to	2	6
hybrida, 3 to 8 feet	1/ to	1	6
RINGO, 2 to 4 feet	2/6 to	5	0
SALICIFOLIA, 2 to 4 feet	1/6 to	3	6
SALVIFOLIA, 2 to 8 feet	1/ to	3	6
SINENSIS, 1 to 2 feet		3	6
SORBUS (*Service*), 3 to 6 feet,	1/ to	2	6
HETEROPHYLLA	1/ to	2	6
SPECTABILIS, 2 to 4 feet	1/ to	2	6
SPURIA, 2 to 4 feet	1/ to	2	6
THEOPHRASTII, 3 to 6 feet	1/ to	2	6
TORINGO, 2 to 3 feet		2	6
UNDULATA, 2 to 3 feet		1	6
VESTITA, 2 to 8 feet	1/6 to	3	6

		Each	
		s.	d.
QUERCUS (*Oak*) ÆGILOPS		1	6
pendula, 6 to 8 feet	5/ to	10	6
AMERICANA coccinea		2	6
CERRIS (*Turkey Oak*). *See page* 5.			
austriaca	1/6 to	5	0
fulhamensis, 2 to 4 feet		2	6
heterophylla, 4 to 6 feet		2	6
laciniata	1/ to	3	6
Lucombeana	2/6 to	5	0
incisa, 2 to 4 feet		2	6
variegata argentea, 2 to 5 feet	2/6 to	7	6
variegata	2/6 to	10	6
pendula	7/6 to	10	6
COCCINEA, 1 year seedlings	℘ 100, 7/6		
2 years seedlings	— 10/6		
18 to 24 inches	— 50/		
2 to 3 feet	— 100/		
3 to 6 feet	1/6 to	5	0
DENSIFLORA	3/6 to	5	0
DENTATA		7	6
FAGINA		1	6
GLABRA	3/6 to	10	6
ILEX (*Evergreen Oak*)			
9 to 12 inches	℘ 100, 25/		
1 to 2 feet	— 50/		
4 to 8 feet	2/6 to	10	6
12 to 15 inches in pots, ℘ doz.,	9/		
Fordii	2/6 to	7	6
diversifolia		2	6
dentata		2	6
integrifolia		2	6
latifolia	2/6 to	5	0
rotundifolia		2	6
salicifolia	1/6 to	3	6
serratifolia	1/6 to	3	6
LONETTI	3/6 to	7	6
NOBILIS		21	0
PANNONICA	2/6 to	10	6
PEDUNCULATA (*Common Oak*). *See page* 5.			
asplenifolia, 3 to 5 feet	2/6 to	5	0
comptoniæfolia	2/6 to	3	6
concordia (*Golden Oak*)	2/6 to	7	6
fastigiata cochleata, 2 to 4 feet	2/6 to	3	6
rubra, 4 to 10 feet	2/6 to	7	6
viride, 3 to 8 feet	2/6 to	7	6
Fennesii, 2 to 8 feet	1/6 to	5	0
filicifolia	2/6 to	3	6
heterophylla, 2 to 4 feet	1/6 to	5	0
cucculata		5	0
dissecta		3	6
nigra	3/6 to	7	6
nigricans		5	6
pectinata		3	0
pendula, 6 to 8 feet	5/ to	10	6
purpurea, 2 to 5 feet	2/6 to	7	6
pterifolia, 2 to 5 feet	2/6 to	5	0
pyramidalis		3	6
variegata bicolor, 2 to 5 feet	2/6 to	5	0
maculata, 2 to 6 feet	1/6 to	5	0
marginata, 2 to 4 feet	2/6 to	5	0
RUBRA		1	6
SUBER (*Cork Tree*)	1/6 to	2	6
TURNERII	1/6 to	2	6
RAPHIOLEPIS OVATA	2/6 to	5	0
RHAMNUS ALATERNUS		1	0
angustifolia	1/ to	1	6

	Each	
	s.	*d.*
RHAMNUS ALATERNUS argenteus	1	6
aurea maculata, 1 to 3 feet 6d. to	3	6
ALNIFOLIUS, 12 to 15 inches	0	9
ALPINUS	2	6
CALIFORNICUS, 1 to 4 feet 1/ to	2	6
CATHARTICUS, 2 to 5 feet 6d. to	2	6
FRANGULA ꝑ 100, 15/		
INFECTORIUS	1	6
LATIFOLIUS, 3 to 6 feet 1/6 to	5	0
RHODODENDRON ALPINE species of sorts		
CAMPANULATUM—		
9 to 12 inches ꝑ 100, 50/		
12 to 18 inches ꝑ 100, 75/ to 100/		
2 feet	2	6
CATAWBIENSE vera 1/ to	1	6
vulgare, 6 to 9 inches ꝑ 100, 25/		
15 to 18 inches — 75/		
CILIATUM, 9 to 15 inches	2	6
DAHURICUM 6d. to	5	0
atrovirens 6d. to	5	0
FERRUGINEUM, 9 to 15 inches	1	6
HIRSUTUM, of sorts 6d. to	2	6
NOBLEANUM, 12 to 18 inches 2/6 to	3	6
PONTICUM (*for Game Coverts, &c.*),		
4 to 6 inches ꝑ 100, 7/6		
6 to 9 inches — 15/		
9 to 12 inches, bushy — 30/		
12 to 15 inches, do. — 50/		
18 to 24 inches, bushy, — 75/ to 100/		
Special offers will be made for large quantities.		
ROBUSTUM, 1 to 2 feet	3	6
HIMALAYAN species, named 2/6 to	10	6
seedlings 1/6 to	7	6
HYBRIDS, best named Sorts, ꝑ doz., 18/ to 42/		
Do. ꝑ 100, 150/ to 200/		
For Species and Named Varieties, including the newest introductions in Hybrids, &c., see separate Catalogue.		
RHODORA CANADENSIS	1	6
RHODOTYPUS KERRIODES	1	6
RHUS (*Sumach*) COTINUS ꝑ doz., 9/ to 18/		
ELEGANS	1	0
GLABRA	5	0
SUCCEDANEA	1	0
TOXICODENDRON	1	0
TYPHINA ꝑ doz., 6/ to 9/		
VENENATA	2	6
RIBES AUREUM	0	9
FRAGRANS	1	0
FUCHSIODES	1	6
GROSSULARIOIDES	0	6
GORDONIANUM	0	6
NIGRUM (*Black Currant*). *See page* 28.		
fol. variegatus	1	0
fructu-viride	0	9
laciniatum	1	0
OPALIFOLIUM	1	0
ORIENTALIS	1	0
SANGUINEUM (*Scarlet Currant*)	0	6
atrosanguineum	0	6
flore albo	0	6
pleno	0	6
SAXATILE	0	6

	Each	
	s.	*d.*
RIBES SPECIOSUM	1	6
ROBINIA HISPIDA (*Rose acacia*) 1/ to	2	6
rosea fl. alba	5	0
grandiflora 1/6 to	3	6
Gordoniana 1/6 to	3	6
PSEUDO-ACACIA, 6 to 10 feet 1/ to	7	6
amorphæfolia, 3 to 4 feet	1	6
Bessoniana 1/6 to	3	6
crispa, 3 to 4 feet	2	6
Decaisneana 1/6 to	2	6
fastigiata 1/6 to	3	6
gigantea 1/6 to	3	6
gracilis	1	6
inermis 1/ to	5	0
macrophylla	2	6
microphylla 1/6 to	3	6
monophylla 2/6 to	7	6
monstrosa 2/6 to	7	6
pendula 3/6 to	7	6
procera	1	6
spectabilis 1/6 to	3	6
stricta 1/6 to	3	6
tortuosa 1/6 to	3	6
umbraculifera 3/6 to	5	0
UNIFOLIA 3/6 to	5	0
VISCOSA 1/6 to	5	0
and other Sorts.		
ROSA. *See* SEPARATE CATALOGUE, *and page* 29.		
ROSMARINUS OFFICINALIS 6d. to	1	0
variegatus	1	0
RUBUS FRUTICOSUS (*Bramble*)—		
fl. pleno albo	0	6
rubra	0	9
superba	0	9
laciniatus	1	6
variegatus	2	6
IDÆUS (*Raspberry*). *See* FRUIT TREE CATALOGUE, *and p.* 28.		
LEUCODERMIS	1	6
NUTKANUS	1	0
ODORATUS	0	6
RUPESTRIS (*Himalayan Bramble*),	1	6
SPECTABILIS (*Salmon Berry*)	1	6
SUBERECTUS	1	6
RUSCUS ACULEATUS (*Butcher's Broom*)	0	6
rotundifolius	0	6
HYPOGLOSSUM	0	6
RACEMOSUS (*Alexandrian Laurel*)	1	0
RUTA GRAVEOLENS	1	6
SALIX (*Willow*). *See page* 5.		
ACUMINATA (*New Tree Willow*), 1/ to	2	6
ALBA pendula (*Bedford Weeping*),	1	0
BABYLONICA, 2 to 6 feet 6d. to	2	6
CAPREA (*Palm Willow*), 1½ to 2 feet ꝑ 100, 15/		
4 to 6 feet 1/ to	2	6
pendula (*Kilmarnock Weeping Willow*) 2/6 to	5	0
variegata	2	6
PURPUREA, 2 to 3 feet	0	6
pendula (*American Weeping Willow*), 6 to 10 feet stems 1/6 to	21	0
variegata	1	6
REGALIS, 2 to 3 feet	1	6
VITALLINA, 2 to 4 feet ꝑ doz., 2/6		
6 to 10 feet 1/6 to	3	6
aurantiaca, 2 to 3 feet	0	6

	Each	
	s.	*d.*
SALIX (*Willow*)		
100 Sorts, named (3 *Cuttings of each*), for 50/		
150 Sorts, named (3 *Cuttings of each*), for 150/		
SALVIA OFFICINALIS	0	6
SAMBUCUS (*Elder*) CANADENSIS. 6d. to	1	0
NIGRA. *See* COMMON ELDER, *page* 4.		
fastigiata 1/ to	2	6
heterophylla	1	0
laciniata 6d. to	1	0
leucocarpa 6d. to	1	0
monstrosa 6d. to	1	6
rotundifolia 6d. to	1	6
variegata argentea 1/ to	1	6
aurea 6d. to	1	6
PUBESCENS	1	0
RACEMOSA. *See* SCARLET ELDER, *p.* 4.		
SANTOLINA CHAMÆCYPARISSUS	0	6
VIRIDIS	1	0
SHEPHERDIA ARGENTEA	1	6
CANADENSIS	1	6
SKIMMIA JAPONICA 1/ to	2	6
LAUREOLA	1	6
OBLATA 2/6 to	5	0
SMILAX ASPERA	1	6
ROTUNDIFOLIA	1	6
SOLANUM CRISPUM	1	0
DULCAMARA	0	6
alba	0	6
SOPHORA JAPONICA 6d. to	1	6
pendula 5/ to	7	6
variegata 2/6 to	3	6
SPARTIUM (*Spanish Broom*) JUNCEUM, 2 to 3 feet, ⅌ doz., 4/		
fl. pleno	1	6
SPARTOCYTISUS ALBUS durus	3	6
SPIRÆA ADIANTIFOLIA	0	6
ALNIFOLIA	0	6
ARIÆFOLIA	0	6
BACCATA	0	6
BELLA	1	0
carnea	0	6
CALLOSA	0	6
alba	0	6
CANA	1	6
CRATÆGIFOLIA	0	6
DOUGLASII	0	6
EXOCHORDIA	1	0
FLEXUOSA	0	9
FORTUNEI	1	0
alba	1	6
HYPERICIFOLIA	0	9
INCANA media	1	0
INCARNATA	0	6
INDICA	1	0
LINDLEYANA	0	6
NOBLEANA	1	0
NUTANS	0	6
PALMATA 2/6 to	5	0
PRUNIFOLIA, fl. pleno	1	0
REGELIANA	1	0
RHOMBIFOLIA	1	0
SALICIFOLIA	0	6
alpestris	0	6
carnea	0	6
SORBIFOLIA	0	6
THALICTROIDES	0	9

	Each	
	s.	*d.*
SPIRÆA THUNBERGIANA	1	6
TOBOLSKIA	0	6
TRILOBATA	1	0
Prices of the leading Sorts ⅌ 100 *or* 1000 *on application.*		
STAUNTONIA LATIFOLIA	1	6
STAPHYLEA COLCHICA	1	0
PINNATA	1	0
TRIFOLIATA	1	0
SWAMMERDAMIA ANTENNARIA	1	6
SYMPHORICARPUS GLAUCUS	0	6
MONTANUS	0	6
OCCIDENTALIS	1	0
PUNICEUS	1	0
RACEMOSUS (*Snowberry*) ⅌ doz. 4/		
VULGARIS	0	6
fol. variegatis	1	0
SYRINGA (*Lilac*) EMODI 1/ to	1	6
JOSIKÆA 1/ to	3	6
PERSICA 1/ to	2	6
alba 1/ to	2	6
laciniata 1/ to	1	6
ROTHOMAGENSIS 1/ to	3	6
VULGARIS (*Common Lilac*) 6d. to	2	6
alba 6d. to	2	6
variegata 1/ to	2	6
cærulea 1/ to	3	6
Charles X. 1/ to	3	6
coccinea 1/ to	3	6
Duchesse de Nemours 1/ to	3	6
Dr Lindley 1/ to	5	0
grandiflora 1/ to	3	6
Louis Bonaparte 1/ to	2	6
Noisettiana 1/ to	3	6
purpurea 1/ to	3	6
rosea 1/ to	3	6
rosea grandiflora	1	0
rubra 1/ to	3	6
sibirica	1	0
sinensis alba	1	0
spectabilis 1/6 to	3	6
Triomphe d'Orleans	1	0
violacea 1/ to	3	6
Fine sorts, unnamed ⅌ doz., 6/ to 12/		
TAMARIX AFRICANA ⅌ doz. 4/		
GALLICA — 4/		
GERMANICA — 4/		
INDICA — 9/		
TILIA (*Lime*), AMERICANA 1/ to	2	6
alba	2	6
heterophylla 2/6 to	3	6
pubescens 2/6 to	3	6
EUROPÆA. *See page* 5.		
asplenifolia	1	6
aurea 1/6 to	2	6
filicifolia	5	0
gigantea 2/6 to	5	0
grandifolia	2	6
aurea 2/6 to	5	0
laciniata 2/6 to	5	0
latifolia 1/6 to	3	6
parvifolia 1/6 to	3	6
pendula, 5 to 8 feet stems 3/6 to	10	6
platyphylla 1/6 to	2	6
LEPTOPHYLLA 1/6 to	5	0
ULEX EUROPÆA (*Whin*). *See page* 5.		
flore pleno, in pots, ⅌ 100, 30/, 50/, to 75/		

	Each	
	s.	d.
ULEX nana ⅌ 100, 25/ to 50/		
stricta (*Irish Furze*), in pots, ⅌ 100, 30/ to 50/		
ULMUS (*Elm* americana, 2 to 12 feet		
pendula, 6 to 12 feet stems, 5/ to	10	6
variegata	1	6
campestris (*English Elm*). *See page* 4.		
grafted, 6 to 10 feet 1/6 to	5	0
betulæfolia, 4 feet	1	6
corylifolia 1/ to	2	6
crenata	2	6
glomerata	2	6
Hanburyensis	2	6
incisa, 5 feet	2	6
microphylla, 3 to 6 feet 2/6 to	5	0
major	5	0
monumentalis, 4 to 6 feet 2/6 to	5	0
myrtifolia, 2 to 10 feet 1/ to	7	6
nodosa, 2 to 4 feet 1/ to	2	6
pendula 3/6 to	10	6
plicata, 4 feet 1/ to	2	6
stricta	2	6
tortuosa 1/ to	2	6
variegata	2	6
argentea, 2 to 6 feet 1/6 to	5	0
viminalis, 2 to 4 feet 1/6 to	2	6
variegata	1	6
effusa, 3 to 5 feet	1	6
glabra, 4 to 6 feet 1/ to	1	6
glomerata, 3 to 6 feet 1/ to	3	6
Scampstoniana, 4 to 5 feet	1	6
vegeta, 4 to 6 feet 1/ to	1	6
viscosa, 4 to 6 feet 1/6 to	2	6
montana (*Wych Elm*). *See p.* 4.		
argentea variegata 2/6 to	3	6
asplenifolia, 2 to 6 feet 1/ to	2	6
compacta 1/6 to	2	6
crispa, 4 to 6 feet 1/ to	3	6
Dampieri	2	6
erecta, 3 to 6 feet 1/6 to	2	6
fastigiata (*Coverstem Elm*) 1/ to	5	0
gigantea	1	6
pendula (*Camperdown Weeping Elm*), stems 6 to 10 feet 3/6 to	21	0
pumila, 3 to 8 feet 1/6 to	7	6
purpurea, 3 to 10 feet 1/6 to	21	0
scabra, 3 to 6 feet 1/ to	2	6
latifolia, 3 to 6 feet 1/ to	2	6
variegata	3	6
suberosa 1/ to	2	6
erecta, 2 to 3 feet	1	6
fungosa 1/6 to	2	6
major 1/6 to	2	6
Several other Sorts 1/6 to	7	6
VACCINIUM buxifolium	0	9
Myrtillus	0	6
ovatum	1	0
uliginosum 1/ to	2	6
Vitis Idæa	0	6
variegata	2	6
VELLA Pseudo-cytisus	1	0
VERONICA Andersonii	1	0
variegata	1	6
decussata	1	0
formosa	2	6
Hulkeana	2	6
salicifolia	1	0

	Each	
	s.	d.
VERONICA speciosa	1	0
hybrida	1	6
other sorts	1	6
VESTIA lycioides	1	6
VIBURNUM Lantana 1/ to	2	6
aurea marginata 1/ to	2	6
variegata	2	6
lantanioides 1/ to	2	6
macrocephalum 2/6 to	5	0
Opulus 6d. to	1	0
nana	0	6
roseum, standards 3/6 to	5	0
sterilis (*Snowball* or *Guelder Rose*) 6d. to	2	6
prunifolium 6d. to	1	0
pyrifolium 6d. to	1	6
reticulatum	2	6
Sieboldii	5	0
Tinus (*Laurestinus*) 9 to 12 inches ⅌ doz., 6/		
15 to 18 inches 12/		
18 to 24 inches 18/		
hirta, 12 to 18 inches 12/		
lucida, 12 to 18 inches ⅌ doz., 9/ to 12/		
variegata 1/ to	2	6
VINCA (*Periwinkle*) major ⅌ doz., 2/6		
aurea reticulata 3/6		
elegantissima — 6/		
minor — 2/6		
alba — 2/6		
cærulea pleno — 6/		
rubra plena — 6/		
variegata argentea — 2/6		
aurea — 2/6		
VIRGILIA lutea	1	0
VITEX Agnus-Castus	1	0
incisa	1	0
VITIS æstivalis	2	6
heterophylla variegata	2	6
Isabella	2	6
labrusca	1	6
riparia	1	6
Sieboldii	2	6
vulpina	1	6
vinifera apiifolia	2	6
WEIGELIA amabilis 1/ to	1	6
alba 1/ to	1	6
Isolene	1	0
Stelznerii	1	6
striata	1	0
hortensis fol. aurea marginata	2	6
nivea floribunda	1	6
hybrida carminea	1	6
Hendersonii	1	6
kermesina	1	6
Lemonei	1	6
Lowii	1	6
rosea 6d. to	1	6
nana variegata	1	6
variegata argentea	1	0
aurea	1	0
Sieboldii variegata	2	6
albo marginata	2	6
XANTHORRHIZA apiifolia (*Yellow Root*)	1	6
XANTHOXYLON fraxineum (*Toothache Tree*)	2	6

		Each s.	d.
YUCCA ALŒFOLIA	2/6 to	21	0
variegata	7/6 to	63	0
FILAMENTOSA	2/6 to	5	0
variegata	10/6 to	63	0
FILIFERA	3/6 to	5	0
FLACCIDA	2/6 to	5	0
stricta		21	0
YUCCA GLORIOSA	2/6 to	21	0
PENDULA	3/6 to	42	0
QUADRICOLOR	21/ to	63	0
RECURVA	2/6 to	5	0
STENOPHYLLA	2/6 to	5	0
ZIZYPHUS SATIVUS (*Jujube Tree*)		2	6

Large Quantities of the leading Trees and Shrubs at Reduced Prices, and Specimens, for immediate effect, by Special Correspondence.

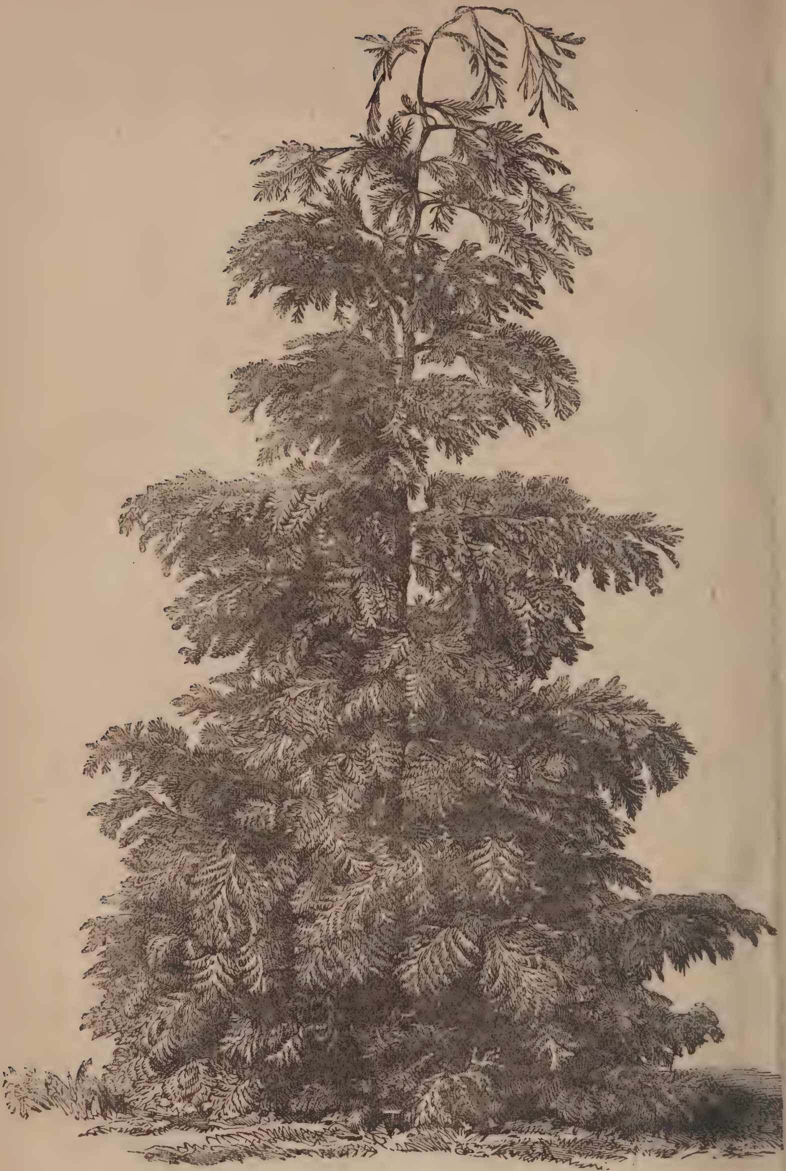
The following Catalogues may be had *free* on application:—

GREENHOUSE and STOVE PLANTS.
HERBACEOUS PLANTS, including ALPINES.
FERNS—*GREENHOUSE, STOVE, and HARDY.*
FLORIST FLOWERS and BEDDING-OUT PLANTS.
RHODODENDRONS and AZALEAS.
ROSES—Descriptive.
STRAWBERRIES.
FRUIT TREES—Descriptive.
GARDEN and FLOWER SEEDS, and IMPLEMENTS.
DUTCH FLOWER ROOTS.
GLADIOLI.
AGRICULTURAL SEEDS.

A TABLE FOR PLANTERS,

Showing the Number of Trees required per Imperial, Scottish, and Irish Acre, from 1 to 30 feet distance between each Plant.

IMPERIAL ACRE.				SCOTTISH ACRE.				IRISH ACRE.			
istance.	Number.	Distance.	Number.	Distance.	Number.	Distance.	Number.	Distance.	Number.	Distance.	Number.
1	43,560	12	302	1	54,760	12	380	1	70,560	12	490
1½	19,360	12½	270	1½	24,338	12½	350	1½	31,360	12½	452
2	10,890	13	257	2	13,690	13	324	2	17,640	13	417
2½	6,970	13½	239	2½	8,761	13½	300	2½	11,209	13½	385
3	4,840	14	222	3	6,084	14	279	3	7,840	14	360
3½	3,556	14½	207	3½	4,470	14½	260	3½	5,760	14½	335
4	2,722	15	193	4	3,422	15	243	4	4,410	15	316
4½	2,151	15½	181	4½	2,704	15½	228	4½	3,484	15½	292
5	1,742	16	170	5	2,190	16	214	5	2,822	16	275
5½	1,440	16½	164	5½	1,810	16½	201	5½	2,332	16½	260
6	1,210	17	150	6	1,521	17	189	6	1,960	17	244
6½	1,031	17½	142	6½	1,296	17½	178	6½	1,670	17½	234
7	889	18	134	7	1,117	18	169	7	1,440	18	217
7½	774	18½	127	7½	973	18½	160	7½	1,254	18½	206
8	680	19	120	8	855	19	151	8	1,102	19	195
8½	603	19½	114	8½	758	19½	143	8½	976	19½	185
9	537	20	108	9	675	20	137	9	871	20	176
9½	482	22	90	9½	606	22	113	9½	782	22	146
10	435	24	75	10	547	24	95	10	705	24	123
10½	395	26	64	10½	496	26	81	10½	640	26	105
11	360	28	55	11	452	28	70	11	583	28	90
11½	329	30	48	11½	414	30	60	11½	533	30	79



CUPRESSUS LAWSONIANA.

THE ORIGINAL SEEDLING IN THE LAWSON NURSERIES.
EDINBURGH

PRINTED BY NEILL AND COMPANY, EDINBURGH.

Boston Public Library
Central Library, Copley Square

Division of
Reference and Research Services

The Date Due Card in the pocket indicates the date on or before which this book should be returned to the Library.

Please do not remove cards from this pocket.

NOV [illegible] 1902

BOSTON PUBLIC LIBRARY
3 9999 09767 878 1